

ELECTRICITY
Nature's Tonic

BY

DR. J. ADAMS.

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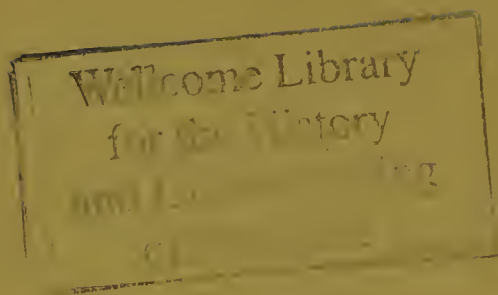
ELECTRICITY;
ITS
MODE OF ACTION UPON THE HUMAN
FRAME,
AND THE
DISEASES IN WHICH IT HAS PROVED
BENEFICIAL,
WITH
VALUABLE HINTS RESPECTING DIET,
&c., &c., &c.

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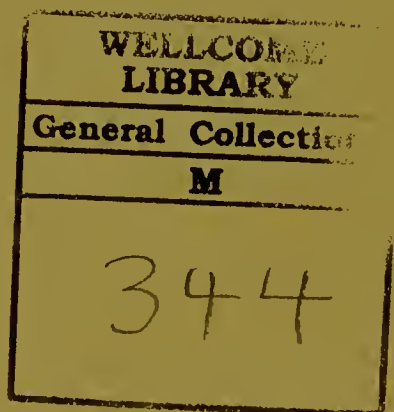
[1875?]



BY THE SAME AUTHOR.

PAMPHLET ON "RUPTURE,"

Containing valuable information respecting the various kinds of Trusses in use, and advice to those desirous of obtaining a RADICAL CURE. Sent *free*.



DEDICATION.

I DEDICATE this book to suffering humanity in general, and to those laboring under impaired nervous energy in particular; trusting that it may not only open their eyes to some of the causes of their ailments, but also direct them to the means of obtaining relief and cure.

THE AUTHOR.

58 BAY ST., TORONTO.

PREFACE.

I HAVE frequently been requested to write a small work that would explain, in short and concise terms, the nature of Electricity in its action upon the human frame and the diseases in which it has been found to act beneficially. There is now no lack of elaborate treatises on the subject, to be found in the book-stores, but the sight of the large volumes, to say nothing of the technical terms so freely used in them, is sufficient to deter a healthy man, much more a sick one, from endeavoring to discover whether Electricity would be likely to relieve his individual ailments.

In these few pages I shall confine myself to absolute essentials, omitting all theories; and as I consider that I am writing for the sick and not for the profession, shall endeavor to reduce what I have to say to the utmost simplicity, and show :

1st. That as Electricity is the principal motive power in Nature, it is easy to understand why it should be considered by those acquainted with its wonderful effects, as NATURE'S OWN MOST APPROPRIATE REMEDY for restoring the Human Frame to Health,

when its natural standard has been reduced, as is too frequently the case in our days, by *over-taxation of mind or body*, by *diseases of a debilitating nature*, by the *pernicious use of violent drugs*, or by *excesses of any kind*.

2nd. That it is particularly in the diseases termed *Chronic* or of *long standing*, which so frequently baffle the ordinary modes of treatment, that Electricity has proved so valuable, owing to its strengthening influence upon the Nervous System, as well as its purifying and vitalizing effects upon the blood.

Lastly ; I shall indicate more particularly the diseases in which it has been found effective, so that any mind of ordinary capacity may be able to judge how far it would be judicious or advisable to undergo a course of Electric treatment.

ELECTRICITY.

IN the Human Frame, as well as in the whole of Nature, Electricity plays a prominent part. Whether it be in the growth of a blade of grass, or in the upheaving of an earthquake, Electricity is the motive power.

It is a well-understood fact, that the things which Nature has produced in the greatest abundance, are those of the greatest use to mankind; such, for instance, as Salt, which not only saturates the oceans, but is found everywhere on land; or Oxygen, the active agent of life, light, heat and water; but Electricity occupies more prominent space still, and must consequently be the highest of all the elements of Nature. It controls all the actions and phenomena of the Universe; it produces light, heat, magnetism, attraction, repulsion, decomposition and recomposition. It is an element, volatile and imponderable, the purest, the most refined.

In speaking of the science of Electricity, we say that it is in its infancy, but Electricity itself is as old as the Sun. It existed before vegetation ornamented our

globe with its varied and rich productions, and it is without doubt the most important element of the human organism, indeed of the whole world. It presides over all the functions of the body, from the highest to the lowest; it is the medium between the spirit of man and the matter he is made of, for it is the instrument of volition, transmitting his will to all parts of the body under the control of the voluntary nerves.

There are in Nature two kinds of Electricity, viz.: the ATMOSPHERIC ELECTRICITY, so-called because it comes directly from the atmosphere, and produces all the external phenomena on the surface of the globe, and the GALVANIC, DYNAMIC or THERMIC ELECTRICITY, because it is the result of decomposition.

A little reflection will suffice to make it understood how the human organism is acted upon by both kinds of Electricity.

The air by which we are surrounded being laden with ATMOSPHERIC ELECTRICITY, we cannot breathe without receiving a constant supply of atmospheric Electricity into the lungs; and as this kind of Electricity is the greatest promoter of life existing in all the productions of Nature, either vegetable or animal, it is evident we cannot take any article of food with-

out swallowing the Electricity it contains ; thus we receive, through the medium of the lungs and stomach, a constant supply of ATMOSPHERIC ELECTRICITY.

On the other hand, all our experiments have undoubtedly established the fact, that chemical decomposition cannot take place without evolving Electricity, and as the body is undergoing a constant chemical decomposition—from birth to death—when each element returns to its primitive condition, it is quite evident that GALVANIC, DYNAMIC or THERMIC ELECTRICITY is being constantly generated within the body.

An eminent French Electrician states that, “In a perfect state of health the nervous fluid pervades the whole organism ; a constant slight current flows from the extremities to the brain, from which it is transmitted along the great nervous centre, or spinal marrow, to the whole nervous system.”

Be this as it may, there is no doubt that the power that pervades the brain and nervous system, and which is doubtless the proximate cause of all vital and voluntary motion and secretion, is *electrical in its nature*, and it requires therefore but very little reflection to consider that Electricity must play the principal part in restoring the human frame, when its functions are disturbed or inadequately performed.

Were it not for the electro-nervous force, proceeding from the brain as its chief physical centre, we should have no adequate cause to account for the distribution of the animal fluids. That the circulation of the blood is the result of electric action, rather than hydraulic pressure, is being gradually acknowledged.

If the circulation of the blood be examined under the microscope in transparent parts, the corpuscles in the capillaries may be observed to have a repulsion to each other. This is quite the contrary to what occurs in the arteries and veins, where they have an attraction to each other, and are repelled from the walls. I refer to the colored corpuscles; the colorless corpuscles seem to be unelectrified bodies, and are merely moved by the power of the circulation, whereas the colored corpuscles are electrified bodies, having attractive and repulsive effects upon one another and the walls of the vessels through which they pass.

On reviewing the evidence of the important office and the mysterious power of Electricity, which, pervading the brain and nervous system, is doubtless the proximate cause of its vital, voluntary and involuntary motions, we can only conclude, that as Electricity is the great electro-motive power in Health, it must be Nature's own remedy in restoring the human frame

to its normal condition, when debilitated by mental, moral or physical excesses, or affected by lingering disease that tends to its ultimate destruction.

Were physicians less prone to frown down everything new, thereby rendering improvement so slow, many a useful discovery, that now lies dormant in the grave with its originator, would have been unfolded to the world for the benefit of suffering humanity. Electricity has long been known to a few learned and scientific men, but their endeavors to bring it into general use were treated with contempt or vituperation, and it is only within the last few years that it has obtained such a hold upon the public mind as to compel medical men to treat it with respect, even while trying to persuade their patients that it was unsuited for their individual cases.

Another science which has not yet recovered from the unmerited contumely into which it had fallen, owing to its having been employed by itinerant pretenders for the purpose of drawing a crowd and amusing the thoughtless multitude for an hour, is PHRENOLOGY; but a day will surely come when its merits will be acknowledged; for, whatever may be alleged to the contrary, it is the only means we possess of forming an estimate of the innate mental and moral tendencies of man.

Mr. Donovan, the late distinguished phrenologist of London, England, to whose kind instructions I am deeply indebted for much of my success as a consulting physician in constitutional diseases, carried the science a step further, and after many years of careful investigation, clearly proved that not only the mental and moral, but also the physical constitution of man might be determined by the conformation of the head, and the few medical men who have become conversant with the subject have borne testimony to its value in the treatment of disease; as by the aid of phrenological diagnosis we are enabled at once to determine the original constitutional condition of a patient's *stomach, heart and lungs*, and form a correct estimate respecting the amount of general vitality which he possesses.

When the merits of Phrenology shall be fully recognized, parents will take their children to well-qualified men and obtain their advice as to the employment for which they are mentally adapted, and then we shall not meet with so many men of undoubted talent whose lives have proved failures, owing to their having been educated to trades or professions for which they had neither the mental nor physical qualifications.

The study of Phrenology will then be considered as

indispensable a part of the education of a teacher as anatomy and physiology are now held to be with the medical student.

And, in like manner, when "Constitutional Phrenology," if I may so call it, has established its claims, parents will be glad to avail themselves of the advice of competent men as to the course of life to be pursued by their offspring in order to eradicate constitutional defects from their systems.

But to return to the subject of Electricity, its study and successful application must ever require time and attention. Many uneducated persons labor under the delusion that in order to test its value in any disease, it is merely necessary to obtain a battery, no matter what kind, hold the two handles, causing a current to pass through the arms and "*take a shock.*" This is one of the mistaken notions which have brought Electricity into disrepute. What sensible person would imagine, that in order to cut out and fit a garment it were only necessary to purchase a pair of scissors and cut away at the cloth?

In order to understand how it is that Electricity acts so beneficially in *Chronic Diseases*, by which we understand *Diseases of long standing*, it will be necessary to explain how diseases become *chronic* or *lingering*.

Let us suppose that two individuals are overtaken in a storm, get thoroughly drenched and have to remain for some time in their wet garments. The result would in all probability be what is commonly termed "a cold." But while in the one person the effects might be thrown off in a few days and health completely restored, in the other they might hang on for months, settling in the joints in the form of Rheumatism, or perhaps on the lungs in the form of Consumption.

The reason of this is, that whereas in the first case the individual was, at the time he took the cold, in good health, with a system free from any lurking impurities, the other must have been suffering, at the time, either from a deteriorated state of the nervous system, incapable of restoring the frame to health, or his blood must have been vitiated by some morbid taint which prevented his return to his former state of health and caused his disease to become *chronic* or *lingering*.

It will therefore be evident that all *chronic diseases* are the result of *Innervation*, commonly termed *Nervous Debility* or a *taint in the blood*.

By *Innervation* or *Nervous Debility* we understand a deficiency in the nervous power necessary for the

proper performance of the functions of any part of the human system, and by *a taint in the blood*, some impurity in the system, such as Salt-rheum, Scrofula, Cancer or the like.

Frequently the two causes are found combined in the same case, when it requires all the more time to effect a cure.

Bearing these facts in mind, it will be easy to explain why Electricity should play such a prominent part in restoring the human frame to health; for, exerting as it does over the nervous system a greater power than any other known agent, it must be considered as the first and best CONSTITUTIONAL TONIC.

Again, when we consider that the labors of Davy, Wollaston, Remak and many others have proved beyond a doubt that Electricity in the form of the GALVANIC BATH, when properly applied, can not only eliminate from the system metallic poisons and other deleterious agents, but also eradicate from the frame those pernicious taints, which, becoming located upon internal organs prevent their performing their normal functions, thereby causing the destruction of the organs themselves and eventually producing premature decay and death;—when we consider all this, we can only conclude that Electricity in its varied

forms and applications would seem to be *Nature's own remedy for restoring deficient tone to the Nervous System as well as for relieving the human frame from its impurities.*

It must not be supposed that Electricity will render medication unnecessary. All really remedial agents work hand in hand. Medicines have their places in restoring health, just as well as Air, Light, Food, Exercise and Rest, and were these latter more carefully considered in the treatment of disease, we should not see so many helpless human wrecks around us.

Other reasons why Electricity, as a remedy, is so little used, are that, firstly, its real nature and effects are so little understood, and secondly, because medical men in general practice have rarely the time to apply it properly; besides which, it is only within the last few years that instruments have been constructed suitable for office practice.

Many persons are greatly in dread of Electricity, being under the impression that its application is painful and somewhat connected with a violent shock. Nothing can be more erroneous than this idea; for, so far from its application being connected with pain, the "Dry Treatment" imparts a sensation of warmth,

vigor and energy to the frame, while the "Galvanic Bath," by its purifying influence upon the system, produces a feeling of ease and comfort difficult to express in words.

Another very common error is to suppose that extremely weak persons, very young or very old people are unfit for the electric treatment, whereas these are the very patients for whom it is most suitable; of course, bearing in mind the strength of the patient, the nature of the case, and adjusting the current accordingly. The justly celebrated Professor Remak of Berlin asserts that he has found it of the greatest value to aged and infirm persons, particularly *prematurely old men and women*.

The term ELECTRICITY is employed to cover all the different forms, viz. :

1st. The GALVANIC, VOLTAIC, DIRECT or DYNAMIC CURRENT.

2nd. The FARADIC, INDUCED, ELECTRO-MAGNETIC or MAGNETO-ELECTRIC CURRENT.

3rd. The FRANKLINIC, STATIC or FRICTIONAL CURRENT.

In this pamphlet I shall merely refer to the two first, the third form being now rarely, if ever, used for medical purposes.

At the present time Electricity is employed in the treatment of disease by means of the so-called

DRY TREATMENT

and the

GALVANO-ELECTRIC BATH.

Under the head of DRY TREATMENT we include the application of Electricity by means of

The FARADIC or INDUCED CURRENT
and the

GALVANIC or DIRECT CURRENT.

The FARADIC or INDUCED CURRENT, or FARADIZATION, as it is also termed, after the lately deceased philosopher Faraday who discovered it, being small in quantity but great in tension, has proved most suitable for imparting *Tone* and *Strength* to the frame in general or to any weak organ in particular. Its action may be considered in the light of a TONIC.

The GALVANIC or DIRECT CURRENT, on the other hand, is larger in quantity but of less tension. It acts more deeply upon the constitution, changing the chemical constituents of both fluids and solids, oxygen and the acids flowing to the positive while hydrogen and the alkalies flow to the negative pole.

If the object in view be to restore sensation and

impart energy and vitality to any part, the *Faradic current* will be found the more suitable; the chemical or electrolytic action being of secondary importance.

Should the object, however, be the removal of morbid deposits or taints, the *Galvanic* or *Electrolytic current*, owing to its well-marked chemical and thermal action, will be required; the effects upon sensation and motion being unnecessary and undesirable.

The effects of the *Galvanic* or *direct current* are not so well understood as those of the Faradic, the reasons whereof are easily explained. The Faradic apparatus is cheap, light and easily transportable, and its effects upon the nerves of sensation are very marked. The effects of this current upon the muscles, when in a wasted condition from lack of nerve-power, are so obvious as to secure universal confidence. On the other hand, the *Galvanic current*, flowing without noise and without sensation, except when in large quantity, and acting catalytically in a class of affections different from those most benefitted by the Faradic current, requiring at the same time large and expensive apparatus, transported with difficulty and easily put out of order, labors under the disadvantage of practical inaccessibility.

The *Galvanic*, or direct current, is much more intense in its action and therefore requires much greater caution in its application. The German Professor Remak was the first to direct the attention of the profession to its superior advantages in the treatment of certain cases, and so extraordinary were the results he obtained that for years his writings were decried and his reputation considerably injured. Time and experience, however, proved that his apparently reckless assertions were correct and the Galvanic current has since then been looked upon with increasing favor by the profession.

In Germany the *Galvanic* current is more employed than the *Faradic*, while in France, at least among the disciples of Duchenne, the preference is given to the *Faradic*.

In England and America both currents are employed; the *Faradic* being considered *better adapted for toning up the system generally*, whereas the *Galvanic* is held more suitable where a *chemical, catalytic and electrolytic* action is required.

The GALVANO-ELECTRIC BATH, while tonic in its nature, is regarded more as a means for eliminating and purifying. It is however from a due combination of the various forms of application that the most brilliant results are obtained.

Though the experiments of philosophers such as Davy, Wollaston and others first demonstrated the eliminative action of the GALVANIC BATH, still its first actual application in disease was by a French gilder named Vergues, who had on the back of his hand an irritable sore caused by the introduction of metallic substances in the process of gilding and silvering. After employing the usual remedies without benefit, he was induced by a friend to try the Galvanic Bath, and on plunging his hand at the positive pole he found, to his great surprise and delight, a thin layer of gold and silver on the metallic plate of the negative pole, and a few baths proved sufficient to cure the ulcer that had hitherto baffled the most active treatment. It was this extraordinary case that led a physician to try its action on the humors of the system, and in many instances with so much success that it is now regarded in the leading capitals of Europe as a standard remedy not only for eliminating metallic poisons from the frame, but also those morbid taints that have hitherto rendered the treatment of chronic diseases so tedious and unsatisfactory.

DISEASE.

HAVING sufficiently explained the nature of Electricity and its action upon the human frame, I shall now proceed to enter more minutely into detail respecting the diseases in the treatment of which it has proved efficacious. The first and most satisfactory results have been strikingly manifest in what is termed

DEBILITY,

by which I mean *a lowered state of vitality, an inability to perform satisfactorily the mental or physical duties of life*. It would require too much time and space to enter fully into the various forms of this common ailment, the symptoms of which are, besides, too evident to require further description.

A very large proportion of *chronic or lingering ailments* are the result of Innervation or impaired vital energy. In one person this may take the form of sick-headache, in another of Dyspepsia or indigestion; a third may suffer from Palpitation of the heart, while in a fourth Constipation may be the principal complaint; and yet in all, innervation or want of nerve-power may be the principal cause, and whether

the standard of the nervous system be raised by change of air, rest, the water-cure or Electricity, *if only the system be really strengthened*, the distressing symptoms will disappear.

The first step towards the successful treatment of *Debility* is to discover the cause, for there is no such thing as debility without a cause.

“Tolle causam” (remove the cause) has ever been the maxim of the thoughtful physician, but unfortunately all medical men cannot be called thoughtful, and to the thoughtless one, too careless or too indolent to seek out and remove the cause of debility, the favorite prescription of “*a tonic*” comes very handy, as it is sometimes followed by excitement and temporary relief,—to be however too frequently followed by *increased debility*. Or, if the physician should belong to that class of men who prescribe “stimulants” in the shape of bitter ale, porter, wine, brandy or whiskey with reckless disregard for the moral as well as physical welfare of their patients, then woe to the unfortunate sufferer who follows this pernicious advice, for so far from obtaining real strength the result is *increased debility*.

How well did the celebrated Sir Astley Cooper explain the true action of stimulants! His words

should constantly ring in the ears of those reckless physicians who, regardless of the fearful consequences, so frequently engender a love of stimulants in their patients to their ultimate destruction.

"We have all been in error," said he, "in prescribing wine as a tonic; ardent spirits and poison are convertible terms." The *stimulus* given is *not strength* and is invariably followed by *increased prostration*. The inevitable reaction leaves the system worse than it was before.

Were those lines duly appreciated, we should not see so many drunkards around us;—drunkards, made so by the very men to whom they applied for relief!

That *stimulation* is invariably followed by *increased prostration* is now thoroughly acknowledged as a rule of Nature, and hence it applies just as well to tea and coffee as to alcoholic stimulants, and to their free and constant use may be attributed much of the debility we see around us.

Many a woman will smile incredulously at this. "What, tea debilitating? Never heard of such nonsense. Only try it and see how a good cup of tea refreshes you when you are tired."

But let me ask you whether a glass of wine is not still considered by many to be refreshing to the tired

man ; and yet science and experience have proved that however pleasant the primary exhilaration may be, increased lassitude is the invariable result.

Dr. Lettsom, a physician of great celebrity in his day, published a small work on tea about one hundred years ago, in which he strongly warned people against its use as having a tendency to produce Nervous Debility. I quote his own words: "It has contri-
buted more or less its share towards the production
of those low nervous diseases which are now so frequent. Amongst these causes, excess in spirituous
liquors is one of the most considerable ; but the first
rise of this pernicious custom is often owing to the
weakness and debility of the system, brought on by
the daily habit of drinking tea ; the trembling hand
seeks a temporary relief in some cordial, in order to
refresh and excite again the enfeebled system; where-
by such almost of necessity fall into a habit of intem-
perance, and frequently entail upon their offspring a
variety of distempers, which otherwise would not
probably have occurred."

If Tea, Coffee and Alcoholic Stimulants are so exhausting to the nervous system, is it to be wondered at that we see so many suffering from NERVOUS DEBILITY? God never intended woman to be the

debilitated creature she now is; so full of aches and pains that it is a rare thing to meet with a thoroughly healthy one. She has become so by her ignorance and neglect of the laws of health. Not that our men are any better, for they are just as much wedded to their tobacco and stimulants as women are to tea; and many a man who scorns the idea of being a drunkard, swallows his tea with all the avidity of an old woman.

Before a person can ever hope to recover from NERVOUS DEBILITY, he or she must be willing to banish *Coffee, Tea and Alcoholic Stimulants* from their table; for as these have an enervating influence, it is useless to imagine that Electricity or any other remedial agent will produce permanent benefit while such debilitating articles of diet are in daily use.

Ignorant physicians and quacks may, for a time, make their patients believe, that under their methods of treatment health may be restored and strength regained without any restrictions to diet; but disappointment and protracted suffering must invariably be the result, and they will have to learn the truth of the old adage that

“ Health, like Godliness, has to be lived for.”

As a consequence of *General Debility* we find,

sooner or later that the organ, or organs, that are constitutionally the weakest become seriously impaired; first *functionally* and later *organically*. For instance, let us suppose that a man's general health has been lowered by some cause, and that his stomach and digestive organs are constitutionally weak,—the result will be, that the debility will be manifested principally by weakness of digestion, flatulence, constipation, and that string of ailments known under the appellation of

DYSPEPSIA.

For this complaint no remedy has yet been found equal to Electricity, as quickly evinced by a more healthy appearance of the complexion, the improved appetite, the removal of the distressing weight after meals, flatulence, depression of spirits, feeble pulse, confined state of the bowels, etc.

Such a result, however, must not be expected if the patient will continue to *bolt his food*, or make his meals off *cake, pie, pastry* or *pickles* and similar abominations; for no man ought to be more careful respecting his diet than the dyspeptic: it should be *good* and *substantial*, but *quite plain*.

Occasionally we find the disease take a purely ner-

vous form, and this is most frequently met with in clergymen and others whose occupation is connected with great mental strain. One case of the kind I remember in a clergyman who suffered from "crawling like worms in the stomach" after a hard Sunday's work. A course of Electricity and a reduction of the length of his sermons from an hour to half an hour, very materially relieved his sufferings.*

For the removal of habitual

CONSTIPATION

with its train of distressing ailments, such as headache, flatulence, piles, etc., etc., Electricity has almost invariably proved effectual, not only by producing regular daily action, but in maintaining that action, provided the most ordinary rules respecting diet be observed.

A gentleman, who was sent to me for incipient paralysis of the lower extremities, after being about ten days under treatment, remarked one morning, "Well, Doctor, if you don't cure me of the paralysis, you have anyhow made my bowels act quite regu-

* A sermon, to produce the desired effect upon the congregation, ought never to exceed twenty minutes in duration.

larly, which is more than they have done for years." In a very short time he found that the treatment was equally effectual in restoring the use of his limbs.

In

JAUNDICE

the "dry treatment" has not proved effectual, but the Galvano-Electric Bath rarely fails to effect a cure in fresh cases free from organic diseases of the liver, sometimes even relieving the trouble with a single bath, as the following can well prove :

Miss W., aged 35, had been suffering for several weeks from jaundice, accompanied by a most distressing itching of the skin of her whole body, great drowsiness and depression of spirits. A similar attack the preceding year had lasted for six months, notwithstanding the most energetic treatment. Of late she had been taking some acid mixture (probably nitric acid) and aloes, but without deriving any benefit. As her means were limited, I tried one or two of our Homœopathic remedies that seemed indicated, being desirous of saving her the expense of the baths, but finding that improvement was very slow I felt compelled to urge a course of baths, and to her great satisfaction the very first one sufficed not only to remove the distressing itching, but every trace of jaundice disappeared within the next few days.

LIVER-COMPLAINT.

In connexion with Dyspepsia, Constipation, etc., we frequently find a string of ailments known by the name of "Liver-Complaint," which consists of more or less distress, pain or weight in the region of the liver, extending up to the right shoulder and down the same side even to the foot, with inability to lie on that side. It is occasionally accompanied by cough and expectoration, leading many to consider themselves consumptive, when the liver is the true seat of the disease. Sooner or later the countenance assumes the yellow jaundiced appearance so characteristic of a disordered state of the liver.

Here Electricity, in the form of the *dry treatment*, combined with the *Galvanic Bath* has been used with signal advantage; the bath relieving the engorged state of the liver, the dry treatment toning up and restoring the organ to its normal condition; which result becomes quickly evident in the clearer complexion, the regular action of the bowels, the natural flow of urine and above all the returning buoyancy of spirits.

How seriously the mind may be affected by a disordered state of the liver, the following case will show. Some time since one of our wholesale merchants walked

into my office with a long, woe-begone face and dropping into a chair said, "Doctor, I want some of your Electric Baths." "What for," said I; "Don't know," was his laconic reply. "What is the matter with you?" was my next question, but to that and all further enquiries I could only elicit the same lugubrious answer, "Don't know," given with a most doleful shake of the head. From his family I afterwards learned that for two years he had been troubled with great despondency, without any apparent cause. Having had him under my care, some years previously, for an affection of the heart, I thought it possible that his mental condition might be in some way connected with his former complaint, but on closer examination could find nothing wrong with that organ, but on passing the sponge over the region of the liver, he started off the stool exclaiming, "Can't stand that, Doctor," which at once led me to the source of his trouble, and a short course of Electricity, applied to the liver, so completely removed the depression of spirits, that one morning after rocking backwards and forwards in a chair and laughing heartily at some ridiculous story he had been telling me, he suddenly jumped up as if the idea had only just struck him, exclaiming: "Why, Doctor, I really think my spirits are much better than

they used to be." In this case a few applications of Electricity, by removing the torpidity of the liver, freed him from a despondent state of mind most distressing to himself, and which had caused considerable uneasiness to his family.

SICK-HEADACHE

is usually considered a disease of the stomach, whereas it is much more frequently connected with a debilitated state of the nervous system, and is most commonly met with in women accustomed to take "a good cup of tea" whenever they feel tired or worried. It is useless for such persons to expect a cure, under any treatment, unless they abandon the use of their enticing beverage; and even then they must expect an aggravation of their sufferings for several days after they have given it up; when a steady improvement may be safely relied on, the attacks coming on less frequently and less violently until they disappear altogether. Many persons have entirely recovered from periodical sick-headache by merely abstaining from the use of tea, and no physician ever yet permanently cured a patient suffering in this manner while the use of tea was continued. To those who are willing to sacrifice the momentary gratification for the purpose of

eventually obtaining complete relief, Electricity holds out every prospect of success, as by means of a few applications the tone of the nervous system is raised and a speedy cure effected.

Another most distressing complaint, which is but too frequently the result of an over-taxed nervous system, goaded on by stimulants and stupified by the injudicious use of narcotics, is

NEURALGIA.

Where it is purely nervous, and the pain seems to dart along the course of a nerve, it may frequently be removed by Electricity as by a charm. Unfortunately it is too frequently connected with a deteriorated state of the nervous system or the result of some irritating taint in the blood, when the relief will only be temporary, unless combined with proper constitutional and hygienic treatment. Of the purely nervous form, the following case is an illustration.

Mr. S., whose occupation as a salesman kept him closely confined to the store all day, had for several years been subject to violent attacks of Neuralgia in the spring of the year, lasting from two to three weeks. These attacks would commence every morning about nine o'clock, with a dull aching over the left eyebrow,

running along the course of the supra-orbital nerve, gradually extending over the left side of the forehead and increasing in severity till noon, when the eye would be bloodshot and suffused with tears. After noon the pain would gradually decrease until five o'clock, when it would cease altogether. He came to my office about the middle of the day, just when the paroxysm was at its height. I applied the direct current to the part for about three minutes, when the pain disappeared like a charm and did not return.

In Neuralgia, the Faradic current is of little or no use, the direct Galvanic current being necessary to produce the desired effect, and when this is scientifically applied a failure is very rare.

Some of the forms of so-called central Neuralgia, such as

LUMBAGO OR BACKACHE,

are treated with equally satisfactory results; so much so, that I do not remember a single instance in which Electricity has not produced either temporary or permanent benefit; one of the most gratifying results being the immediate relief that is afforded; the patient walking into the office with constrained and careful motions and leaving with that free and easy step that denotes complete release from pain. So long as there

is no inflammatory action going on, when Electricity should not be used, relief may surely be relied on, and a few consecutive applications generally suffice to render the cure permanent.

CATARRH.

This Chronic inflammation of the mucous membrane of the nostrils may be materially benefited by the application of Electricity, but it is rarely cured without appropriate constitutional treatment. It is greatly to be regretted that medical men of good standing should still persist in treating this affection with injections and other local remedies. One case that came under my own immediate observation should be a warning to those physicians who will apply local treatment for constitutional diseases. A middle-aged man came from a considerable distance to obtain my advice respecting a stupid feeling in his head, that completely prevented him from attending to his business as a watchmaker. On enquiring into the cause, I learned that it was the result of stopping a catarrh with an injection, or snuff, I am not certain which. I told him that his only chance was to remain in town for a while till, by means of Electricity, the discharge could be restored, but having been for several months

out of work his means would not permit of his remaining, and he was therefore compelled to return home, and I have not heard from him since. Another case of the kind was a young printer, who for several years had been labouring under a most distressing pressure just above the forehead, which, though it did not actually prevent his working, hindered him from reading, particularly anything that required thought or reflection. As in the former instance, it was the result of arrested catarrh, the best proof of which was, that just in proportion as the discharge returned, the pressure on the head was relieved, though it required several months to effect a cure. One more case was that of a gentleman I was introduced to three or four years ago. Learning that he was a sufferer from Catarrh, I advised him to avoid the use of local remedies; but he laughed at my suggestions, telling me that he took a good pinch of some kind of catarrh snuff every morning early, which cleared out his nostrils and gave him complete relief for the day. Finding that my advice was not appreciated, I, as a matter of course, desisted from urging it; now, when too late, I hear that he regrets having declined my friendly advice, being a constant sufferer from a very distressing pain in the forehead, just above the root of the

nose, which has hitherto baffled every remedy that he has tried.

Catarrh is one of the commonest complaints of Canada. At first it is considered a mere cold in the head and treated carelessly, under the impression that it will soon wear off. When it becomes chronic, the cause lies either in a deficiency of the nerve-power required to restore the parts to their normal condition, or in some constitutional dyscrasia, or impurity in the blood. Should the case be one of mere deficiency of nervous tone, Electricity will soon relieve and cure; but unfortunately the latter cause is almost invariably present, and appropriate constitutional remedies must be resorted to, in order to produce a favorable and permanent result. Though Chronic Catarrh is not usually considered dangerous, still it will occasionally creep down to the lungs, resulting in Laryngitis, Bronchitis and even Consumption.

One of the commonest results of Chronic Catarrh is

ANOSMIA (LOSS OF SMELL),

which may be partial or complete, from simple and hardly perceptible deficiency of smell to absolute inability to detect the most powerful odor.

In the milder forms of this ailment, Electricity may

be relied upon, but a cure is rarely effected where the sense of smell has been entirely lost for a length of time.

SLEEPLESSNESS.

Among the numerous ailments consequent upon Nervous Debility, Sleeplessness is one of the most common, the most distressing, and I may add, the most dangerous, as it is frequently one of the premonitory symptoms of Insanity. Many a life has been spent in an asylum that might have been saved by a few applications of Electricity, when the disease of the brain was merely functional, as the two following cases will serve to illustrate :

Mrs. D., aged 35, of fair average constitution, and mother of three children, suffered for several years from distressing pain in the upper part of the spine extending to the back of the head, with sensations of fulness and weight. The pains were so distressing as to prevent sleep, resulting in loss of appetite and general prostration. A state of settled melancholy caused her to be confined in a lunatic asylum, from which her husband was persuaded to withdraw her in order to test the efficacy of Electricity. The positive pole was applied to the back of the head, and the negative held

in the hand, a moderate Galvanic current being employed. After the first application she felt her head relieved and slept soundly, the melancholy soon disappeared, her appetite returned, and in two or three weeks she considered herself cured, though the treatment was continued occasionally for some time longer.

The other case was one in which the melancholy had degenerated into acute mania and where the opinion of her medical attendants was most unfavorable, her brain being considered organically affected. The effect of Galvanization was to produce refreshing sleep, and to the surprise of her friends she soon regained her health and strength.

Another instance in which the action of Electricity, though less prompt than in the former cases, was equally satisfactory in the end, was Mr. D. M., whose position on the railway was one of more responsibility than his nervous temperament could well stand, the consequence of which was a failure in general health, owing in a great measure to sleeplessness. He was unable to obtain more than two or three hours' fair sleep during the night, and the effect it had upon him was to cause great irritability, so much so that he found the greatest difficulty in controlling his temper. The Faradic current was used to tone up the nervous

system, and the effect was to gradually lengthen the duration of sleep till he could sleep soundly for six hours every night, when he declined to continue the treatment, expressing himself quite satisfied with the result, being fully equal to his work. He has remained well ever since.

CHRONIC BRONCHITIS.

With the exception of *General Nervous Prostration*, there is perhaps no disease in which the beneficial results of Electricity are more strikingly manifest than in *Chronic Bronchitis*. Generally, it is the result of a neglected cold, that has left the bronchial tubes in such a debilitated state that every fresh attack aggravates the symptoms, gradually contracting the tubes and producing a distressing shortness of breath, which incapacitates a person more and more for anything like active exertion. It is also frequently met with in children, in whom the rounded shoulders, the caved-in chest, the racking cough, and wheezing, rattling breathing at the slightest fresh cold, at once proclaim the nature of the complaint.

Occasionally it is confounded with Asthma, with which it has many symptoms in common; the peculiar characteristics are however generally sufficiently

marked to enable the observant physician to form a correct diagnosis.

Under the most careful allopathic treatment, temporary relief is all that can be obtained, whilst under the combined treatment of Electricity and Homœopathy, each successive attack becomes less violent until they cease altogether, the improvement being more strikingly manifested in children by the lowered shoulders, the expanding chest and the loss of that distressing expression of face so peculiar to habitual sufferers from Chronic Bronchitis and Asthma.

WINTER COUGH

is an affection frequently met with in elderly people, and may be considered as a form of Chronic Bronchitis. During the Summer months they experience a certain amount of freedom from cough and distress of breathing, but the first raw day of the Fall reminds them of their weak parts and the "Chest-protectors" are at once applied to ward off the impending attack.

Here, Electricity in the form of Faradism, combined with the appropriate constitutional treatment, acts like a perfect Godsend, toning up the system generally and the chest in particular, rendering the frame less susceptible to atmospheric influence. It frequently

happens that elderly persons, who for years have had either to confine themselves to a warm room all Winter, or go round muffled up in shawls and wrappers with respirators over their mouths, find to their great astonishment that a course of Electricity in the Fall enables them to enjoy the bracing Winter weather, instead of dreading it as heretofore.

ASTHMA.

This distressing disease consists in a spasmodic contraction of the bronchial tubes, caused by reflex irritation of the pneumo-gastric nerves. Although it may occasionally depend upon a debilitated state of the nervous system, I have almost invariably found it connected with some taint in the blood, as the following case will clearly demonstrate:—Mrs. S., 35 years of age, a stout, healthy-looking woman, was subject to most violent attacks of Asthma, which would sometimes last for several weeks, coming on without any apparent cause, though she thought she could sometimes trace them to standing in a draught when heated by exertion. After a few applications of the Faradic current, she entered my office one day with the joyful exclamation: “Doctor, I am quite well, I can run up and down stairs like a kitten, but

I must show you something that has come out on my chest." And there, surely enough, was the taint in the form of a small patch of Psoriasis or sealy tetter. On further enquiry, she remembered having noticed that there was no eruption visible as long as she suffered from the attacks. A course of suitable medicine gradually removed the taint from the blood, when the attacks and the eruption ceased altogether.

Another illustrative case occurred some years ago in a Mr. J. M., 42 years old, wholesale merchant of this city. He had been declared by several physicians to be hopelessly consumptive, while others considered it an aggravated form of Chronic Bronchitis and Asthma combined. After some weeks' treatment his breathing became by degrees more free, the expectoration gradually ceased, and this gentleman, to the astonishment of his friends, recovered his health so as to be able to resume his place in the business. But, just in proportion as his general health improved, his hands, to his great mortification, began to show unmistakable signs of Salt-rheum, in the shape of deep cracks in the bends of the joints. Before leaving him, I warned him to be most careful never to apply any local remedies to the hands, for if he succeeded in drying up the cracks the affection of the lungs would

be sure to re-appear; urging, at the same time, the necessity of treating the disease by constitutional means. Though he declined to follow my advice in this latter respect, he for some time abstained from using anything locally; but hearing one day of some wonderful salve for the Salt-rheum, he could not refrain from giving it a trial, if only to prove that I was in the wrong. In a short time he succeeded in closing the chaps or cracks on his fingers, but hardly had he time to congratulate himself upon the cure before his old disease of the lungs returned in full force. When he came to me, I felt annoyed with him for having acted contrary to my instructions and told him that it served him right, which so incensed him that he left my office in anger. For several months he tried in vain to obtain relief, and at last went to the south of France where, under the compressed-air treatment, he once more regained his health. On his return to Toronto, I happened to meet him one day and congratulated him on his improved appearance, when he held out his hands, saying: "You were right, Doctor, after all, for I never knew a day's health till my hands broke out again. You'll not catch me using any more salve this time."

Sooner or later permanent contraction of the bron-

chial tubes and consequent narrowing of the air-passages take place, and later still the lungs and heart become affected, when temporary relief is all that can be obtained, though life may, by judicious electric and medical treatment, be rendered comparatively comfortable and its duration thereby considerably lengthened.

In some cases, we find that organic diseases of the lungs and heart are the cause instead of the effect of Asthma, when the treatment has to be modified accordingly.

Although the Faradic current has frequently been employed with very satisfactory results in Asthma, still the Galvanic current is the one most in favor with electricians, owing to its extraordinary power in lessening the irritability of the nervous system and its action in driving the taints of the blood to the external surface of the body. By its judicious use, the paroxysms may be kept off for an indefinite length of time, affording an opportunity of applying the necessary constitutional treatment to the system in general.

CONSUMPTION.

Many who read this small work will no doubt be anxious to learn whether Consumption may be cured,

or even arrested, by Electricity, but before I proceed to give the results of my experience, let me try to explain what I consider the true nature of this greatly dreaded disease. The term Consumption is generally employed to denote an affection of the lungs, whereas it is, in the majority of cases, the result of some other disease that has undermined the constitution and terminated in disease of the lungs. The affection of the lungs is the end, not the beginning, of the disease.

In the former part of this little work, I endeavored to explain the nature of Chronic, or lingering diseases, and to show that very few persons are born with evenly-balanced organizations; and that when the general health is lowered by any cause, the result of the debility is principally manifested in the weakest organ. In our northern climates, owing to the sudden atmospheric changes, the lungs, of all parts of our body, have the greater tendency to become diseased, just as in the south, from the intense heat that prevails during so many months of the year, the liver is more predisposed to disorder. Then again, those employments that keep people confined in-doors for many hours during the day, working in cramped attitudes, have a natural tendency to weaken the lungs and engender Consumption. This will account for

the fact, that while 17 to 18 per cent. of tailors die of Consumption, only 4 per cent. of market-gardeners fall victims to the disease.

Occasionally we meet with persons of decidedly tuberculous type—by which we understand a constitutional tendency to the formation of tubercles in the lungs or other parts of the body, owing to a diseased state of the blood. If such persons lead sedentary or in-door lives, they are almost certain to die of consumption. With them, the seeds of the disease are inherited, and it is only when treated in youth or before the disease has become developed that there is any chance. Well do I remember a sweet girl between 17 and 18 years of age, who was brought to me by her mother. One glance at the formation of the head and a few simple questions satisfied me as to the hopelessness of the case. The mother was thunderstruck when I gave her my opinion, but a few months sufficed to prove its correctness.

In the premonitory stage of Consumption, that is, when the general health is running down but tubercles have not yet been formed in the lungs, Electricity may be used with great hopes of success; but when once the tubercular deposit has taken place to any considerable extent, Electricity, so far from doing good,

hastens on the ultimate end. This is the incurable stage of the disease—incurable only in so far as Electricity is concerned, for there are many well-authenticated cases of persons recovering from consumption after they had been given up by physicians of undoubted ability. Such cures, or recoveries, are usually the result of a complete change in the mode of life, such as from a quiet in-door life to an active out-door occupation. Some years ago I had a case under my care that was very illustrative of the action of out-door occupation in arresting consumption:—D. S., aged 32, a printer by trade, of decidedly scrofulous constitution, had suffered as a child from white-swelling of the knec, and when he applied to me, I found on examination that there was a large cavity in the upper part of the left lung, with considerable cough and expectoration of matter streaked with blood. I told him that I could do but little for him, but that he might lengthen his days considerably by following some out-door occupation. “I do that, Doctor,” said he, “as much as possible, or I should have been in my grave years ago. I only work four days in the week, and go out shooting the rest of the time.” I had an opportunity of watching him for several years, and was astonished to see how much the disease was kept in

check by his being for three days in the week almost entirely in the open air, the medicines I prescribed from time to time being merely directed towards removing the effects of any fresh cold. One day he had the misfortune to upset his canoe and lose his favorite gun, which seemed to break his heart and he refused to go out shooting any more. In vain did I tell him he would not live six months if he stopped at home, out he would not go, and in less than four months he was in his grave.

Another case which came to my knowledge, though not exactly under my own eye, will show how cures in consumption are attributed to anything but the right cause:—A gentleman in the prime of life had been troubled for some time with a distressing cough with profuse expectoration, the result of a wetting while out shooting, and for which he had been lying up, as he called it. His friends, becoming alarmed, compelled him to consult a physician who was considered very clever in diseases of the lungs, and after a careful examination he was told that his case was hopeless and that he could not survive six months. On learning this he immediately started for the country, determined to spend his last months in shooting, a sport he was particularly fond of, and

under the impression that his days were short, was reckless as to the weather ; morning, noon and night, rain or shine was all the same to him. After two or three months of this life, he was astonished and delighted to find that his cough had entirely disappeared and his breathing become as free as ever. About a year from the time he first consulted the physician, he re-entered his office and requested to have his lungs examined, and on the Doctor assuring him that they were quite sound, he asked him whether he did not remember him. The Doctor said he did not, and was not a little surprised to hear that he was a patient that he had given up as incurable a year before. Naturally enough, the Doctor made all sorts of enquiries as to the treatment he had followed, and was staggered to learn that "he had thrown physic to the dogs." "But what was your diet?" said he at last. "Well, Doctor," was the reply, "I ate everything that came along, and generally wound up with a couple of glasses of whiskey-punch at bedtime." "That was it," exclaimed the Doctor, "it was the whiskey-punch that cured you;" and he forthwith wrote a lengthy article on the benefits to be derived from stimulants in general, and whiskey-punch in particular, in the treatment of Consumption—which article may have had

something to do with the still prevalent idea that liquor is good for consumption—than which, a greater mistake was never made !

To the educated physician, the discovery of the early stages of Consumption, by the aid of the stethoscope, is generally easy, particularly if conversant with the phrenological signs that denote the consumptive diathesis ; but to the uninitiated there are three simple indications by which the disease may be recognized with comparative certainty in its early and curable stage. These are : *Shortness of Breath, Quickness of Pulse and Loss of Flesh.* A person may have any two of these signs without being consumptive, but where all three are united in the same person, there is little doubt of the nature of the case, and unless at once attended to, the patient may be lost.

In the first stage of Consumption, that is when the complaint, as yet, is rather one of general debility than a local disease, the cause has to be ascertained and removed, and it is at this period that Electricity is of great value in building up the system and restoring the various organs to their normal condition, thereby preventing any further encroachment. But when once hæmorrhage has occurred or the lungs have become ulcerated, Electricity should not be employed ; for, so

far from doing good, it is almost certain to reproduce the hæmorrhage and hurry the patient to the grave.

WEAK BACK.

This affection is frequently met with in young persons, particularly of the female sex, who have grown up very fast. There is, at first, no actual disease, but a constant sense of weariness and pain; inability to sit up long; inclination to lie down at every opportunity, and a general listlessness inconsistent with perfect health. After a time, unless relief be obtained, the spine really gives way and spinal curvature ensues. These ailments are most frequently the result of improper food and the want of adequate exercise. It is rarely met with in boys, because they are allowed to run about and take plenty of out-door exercise; but in our young ladies, brought up like hot-house plants, with stays and tightly-fitting dresses that prevent the proper expansion of the lungs, and thereby hinder the thorough oxygenation of the blood, *Weak Back* is one of the commonest complaints. The *Magnetic Belt*, if combined with suitable exercises for strengthening the back, sponging the back with cold water every morning, followed by brisk rubbing, total abstinence from *tea*, and the use of *brown bread*

instead of white, will cure many cases, but if the symptoms are of long standing, Electricity in the form of Faradism ought to be resorted to, or the result will be

SPINAL CURVATURE,

of which there are two principal varieties, viz.: the *lateral* and the *angular*. The former is usually the result of general debility, which has produced a relaxed and flabby state of the tissues, resulting in a loss of power adequate to support the upper part of the body. It is first observed that one shoulder is higher than the other, or that the shoulder-blade "*is growing out.*" In proportion as one shoulder is high, the other becomes unduly depressed; one hip projects while the opposite one is drawn inwards; and on closer examination the spinal column will be found curved. If neglected or improperly treated, the health gradually fails; and, owing to the compressing of the lungs, Consumption is a frequent result.

Lateral Curvature of the Spine being based on *debility*, it need hardly be stated that Electricity has proved the most efficacious remedy in its treatment, the results being very soon apparent, owing to the facility with which the Faradic current may be applied to the spine, imparting tone to the enfeebled muscles and vigor to the system in general.

In *Angular Curvature of the Spine* we have a totally different disease to deal with, the bony structure being affected and not the muscles, as in the former complaint. This disease is easily recognized, and can hardly be mistaken, for while in the *lateral* curvature the spine partakes more or less of the shape of a capital S; in the *angular* there is a projection of two or three of the vertebræ of the spine forming an angle, hence its name *angular*. It is invariably associated with some constitutional affection, such as scrofula, etc., and unless immediately and most judiciously attended to, produces destruction of the bones, and, in the most favorable cases, incurable deformity.

The proper treatment of *angular* curvature of the spine is *constitutional*, with a properly-fitting support to the back. The application of Electricity has not resulted in any benefit, rather the contrary. Much patience and perseverance are required on the part of the physician as well as the patient, many months being required to obtain anything like favorable results. However, there is no need to abandon hope, as the following letter will show :

“SIR,—You will no doubt remember my calling on you some months ago, with my little boy, who has a

curvature of the spine. You directed me to a Mr. Authors (mechanical instrument maker, 16 King-st. East, Toronto), for a spinal support. I am happy to inform you that the spinal support has nearly cured him of the curvature, etc., etc."

In this case I prescribed a plain but nourishing diet and constitutional medicine; though, from the tone of the letter, it is evident that the father considers the support to have done the most in curing the child; people being very apt to overlook the benefit resulting from judicious and suitable diet. It is only by a proper combination of internal treatment and external support that favorable results can be obtained. Electricity, though very beneficial in *lateral* curvature, should never be resorted to in the *angular* form of the disease.

DIABETES.

It is only recently that the true seat of this disease has been ascertained, the stomach, liver and kidneys having in turn been considered the origin of the trouble. True, after death, these organs have been found diseased, but these evidences were the results, not the disease itself. It was an accidental blow upon the head that first led to the idea that a disordered

state of the nervous system might be the cause. Dr. C. Bernard produced many of the symptoms by puncturing a certain part of the brain, and other physicians have produced similar results by lacerating different parts of the nervous system. That Diabetes is intimately connected with, if not actually caused by, a deteriorated state of the nervous system, may justly be inferred from the successful results that have followed its treatment by Electricity. The principal symptoms are constant thirst, dry skin, pain and weakness in the loins, and excessive flow of urine laden with a peculiar kind of sugar.

To Dr. Donkin we are deeply indebted for the knowledge that valuable assistance is afforded by an exclusive milk diet in this disease, and now that the value of Electricity is being appreciated, it is gradually losing that character for fatality that has hitherto been connected with it, as the following case will illustrate:—Rev. Mr. N., a clergyman of considerable ability, but greatly overworked, sent me word through his wife that he was suffering from lumbago. I prescribed what I considered the most suitable remedies under the circumstances, but received word a few days later that he was no better, but rather worse, being evidently weaker. Thinking that there must be something

more than an ordinary cold in his case, I made further enquiries respecting his general health, and learned that he had been ailing for some considerable time, complaining principally of his back, passing large quantities of urine and troubled with great thirst. These symptoms led me to suspect that he was suffering from Diabetes, which was verified on examining his urine, which I found laden with glucose, or grape-sugar. He had been for some time unable to attend to his ministerial duties. I at once put him on a strictly milk diet, while employing the most suitable internal remedies combined with Electricity. At first it seemed as if the milk would not agree with him, his tongue turning as white as the milk itself, but after a little while it was evident to all his friends that he was improving, for notwithstanding that his food consisted wholly and solely of skim-milk, he steadily regained his strength, and one Sunday, being disappointed in a substitute, he was unexpectedly compelled to undertake the duties, and to his great astonishment and delight went through the whole service without the slightest difficulty. Gradually the sugar disappeared from his urine, and in a comparatively short time his health was thoroughly re-established.

In this case, complete cessation from all mental labor was the first step towards recovering the lost nervous tone; the bland, unstimulating, but highly nourishing milk restored the wasted tissues, and the internal use of such remedies as are well known to remove the effects of nervous exhaustion, with the powerful assistance of Electricity, were the means, under God, of preserving a useful and valuable life from a most distressing premature death.

I could refer to several other equally striking cases, but one is as good as a dozen for proving the curability of the disease. Such favorable results can, however, only be expected if applied at the onset of the disease, before any of the internal parts have become organically affected.

PARALYSIS.

In no disease has Electricity been more frequently employed than in Paralysis, and while the results have been most brilliant in some cases, truth compels us to state that in others it has altogether failed. The reason is, that Paralysis is not a disease, but the result of some affection of the brain or spinal marrow interfering with, or preventing, the proper action of the nervous system. It would require a large book,

instead of the few pages that I can devote to the subject, to give anything like an adequate idea of the numerous diseases that tend to produce Paralysis; I will therefore confine myself to the simple statement that Paralysis consists in a *total* or *partial loss of sensibility* or *motion*, or of *both*, in one or more parts of the body. It may be *perfect* or *imperfect*. It may be *general*, affecting the whole body, or *partial*, when confined to one portion alone.

One of the most frequent causes of Paralysis is Apoplexy, and the benefit to be derived from Electricity, or any other form of treatment, depends mainly upon the amount of actual injury which the brain has sustained. This, as may well be imagined, requires careful consideration at the hands of the physician.

It most frequently appears in the form of

HEMIPLEGIA

or Paralysis of one side of the body, and if taken early enough is usually amenable to treatment, though complete recovery is rare, a certain amount of rigidity usually remaining.

PARAPLEGIA

or Paralysis of the lower half of the body, has its

origin in some morbid condition of the spinal cord. It is often the result of spinal exhaustion, without any actual degeneration of tissue. Such cases, if attended to before the spinal cord has been permanently injured by the injudicious use of powerful drugs like strychnine, etc., are frequently cured by Electricity, though the chances diminish the longer the treatment is delayed.

RHEUMATIC PARALYSIS

frequently remains after an attack of rheumatism, affecting the muscles and causing a wasting of the limbs, if not attended to. The sooner Electricity is applied to the parts the better, though even in cases of long standing, where the joints have become rigid from want of use, a cure may still be effected by combining Kinesipathy with Electricity.

The following case will serve as an illustration of this kind of Paralysis:—Mrs. E., aged 56, had for two years been unable to do her own hair, owing to a paralyzed condition of the muscles of the upper part of the right arm. It was with the greatest difficulty that she could raise her arm sufficiently to touch her right ear. She attributed it to a severe attack of rheumatism with which she had been afflicted about two years previous to her applying to me. All kinds

of lotions and liniments had been used in vain. The Faradic current was applied freely to the neck and upper arm, followed by Kinesipathy, and in two months she was able to pass her hand over her head so as to touch the left ear. The cure was permanent.

CONSTITUTIONAL PARALYSIS

depends upon some blood-poison, or constitutional degeneration of tissue. Syphilis, Gout and Rheumatism are the most frequent causes met with, while lead, mercury and opium are the medicinal agents that most commonly produce the paralyzed state. It is in such cases that the Galvano-Electric Bath is found so efficacious in eliminating the poisons or morbid taints from the system, after which the Faradic current, by its tonic action, restores the limbs to their original standard of power and feeling.

Another form of Paralysis, unfortunately too often met with, is

LOCOMOTOR-ATAXIA,

or progressive palsy, the true cause of which has only lately been ascertained. It is now known to depend upon a wasting and degeneration of a certain part of the spine, whence the morbid process travels towards

the surface, and, when fully established, is beyond the power of any treatment. The principal symptom is a want of power to control the movements of the lower limbs. The gait is hurried and staggering, and in attempting to walk the patient drops his heel heavily on the ground at every step, swings from side to side, throwing out his hands to balance himself, like an unskilled rope-dancer. At the same time there are severe erratic pains, chiefly in the feet and legs; these pains are boring, throbbing, shooting, sometimes sharp and sudden like an electric shock. The intellect and memory are frequently unimpaired.

As long as the disease is in the first stage, the symptoms of which consist in a twitching of the muscles with stinging and crawling in different parts, a disposition in the arm or leg to "go to sleep," sense of weakness in the limbs and a peculiar cushion-like feeling in the soles of the feet, with flying pains in different parts of the body, etc., very great benefit may be expected from the Electric treatment, because degeneration of the nerve substance has not yet taken place; but as these symptoms become more marked, the chances of recovery decrease in proportion, though even then the disease may be arrested at a certain stage.

Although this disease is occasionally met with in persons who have been exposed to severe cold, after unusual and protracted exertion, it is generally the result of long-continued abuse of the sexual system, and hence much more frequently met with in men than in women; rarely, if ever, in children.

I will merely add, for the satisfaction of those suffering from Paralysis, that Electricity imparts heat to the coldest limbs, even in cases where the heat of the strongest fire has failed to afford it; nor is this to be wondered at, when we consider that by means of the Galvanic battery even platinum, the hardest of metals, can be made red-hot in an instant.

CHOREA (ST. VITUS' DANCE)

is a disease characterized by twitchings and jumpings, often ludicrous actions of voluntary muscles, especially of the face and limbs. It most frequently attacks girls between the ages of six and sixteen, though it is not uncommon in boys. It may be brought on by any irritant cause, as fright, late hours, mental excitement beyond the power of the young and susceptible nervous system, but usually in young persons of inherited nervous constitution. Many of the milder cases of Chorea recover in a few months, if left wholly to

Nature, and placed on a plain, substantial and unstimulating diet, with plenty of out-door exercise. The spine might be sponged down every morning with salt water and thoroughly rubbed till quite red.

Should the case, however, fail to be relieved by these simple means, Electricity, in the form of the Faradic current, may be relied on. The feet should be placed on a copper plate, or in a pail of warm water, connected with the negative pole, while the positive is passed down the spine, etc., etc.

The following case is strikingly illustrative of the power of Electricity not only to impart tone to the nervous system, but also heat to the parts:—Miss M., aged 18, had been suffering for some months from St. Vitus' Dance. Her left side alone being affected, I placed the corresponding foot in a warm bath and passed the sponge down the spine and afterwards down the left arm. Improvement soon became apparent in the greater control she obtained over her hand and arm, when one day her mother enquired whether there would be any objection to her having both feet placed in the foot-bath, as her daughter complained that whereas she formerly had both feet cold at night, now the electrified one was warm, while the other remained as cold as ever. By immersing both feet

during the application she soon had the satisfaction of having the right foot as warm as the left. Eventually she was cured of both ailments.

A disease of far greater importance than the last is

EPILEPSY,

the symptoms of which are too well known to require any description at my hands. That the disease is the result of some morbid action present in the great nervous centres, and that it is frequently hereditary, are facts fully established.

It has unfortunately been so long considered incurable that, until lately, medical men have preferred to turn their attention to diseases that promised more satisfactory results. Of late, however, particularly since the effects of the Direct Galvanic Current have become better understood, several physicians of eminence have acknowledged themselves astonished at the controlling influence that Electricity exerted over Epilepsy, and when combined with appropriate internal remedies the results have often been as striking as they were gratifying.

The Faradic current is, as a rule, useless in this disease, as it exerts little or no effect upon the nervous centres; indeed, the only cases of Epilepsy in which

it has ever been of service have been those in which the menstrual function was dormant or irregular. But by applying the Direct Galvanic current to the sympathetic system of nerves, and occasionally to the head and spine, the attacks can in many instances be materially relieved, and their frequency lessened, even after a very short course of treatment. One of our most distinguished English electricians states, that out of sixty-four cases of Epilepsy treated by Electricity, a large majority received immediate benefit; and other physicians who have applied it carefully and scientifically testify to similar satisfactory results.

In no disease is it more necessary to consider every case individually, as a course of Electric and medical treatment that would benefit one case, might be totally unsuitable and injurious in another.

The first object to be attained is the suppression of the attacks, as every return strengthens the Epileptic habit, and renders it more difficult to control; besides which it causes great prostration and exhaustion of the nervous power.

The second object is to induce a total change in the nutrition of the brain and nervous matter generally, so as to restore their proper controlling force to the centres of consciousness and motive power.

The last, and by no means the least, important aim should be to improve the general health, and remove all sources of irritation from mind and body.

In Epilepsy, as in most other chronic, or lingering, diseases, the treatment has to be continued for a length of time, and unless both patient and physician persevere, the result is likely to be disappointing. It would, in fact, be unreasonable to expect a rapid cure in a disease which has been progressing for a considerable length of time, as it must naturally require a proportionate time for its removal. Although in a majority of cases the convulsions may be controlled in a comparatively short time, yet the Epileptic condition is not thereby eradicated; this can only be effected in time, as the Epileptic constitution is one of such stubborn obstinacy as to require the alterative and strengthening effect of Electricity in its fullest extent, to produce permanently beneficial results.

The disease is much more difficult to cure where it is hereditary; recent cases being, as a matter of course, more amenable to treatment than those of long standing. Women are more susceptible of cure than men, and young men than those advanced in years.

After the attacks have been brought under control for a longer or shorter period of time, there is often a

trying period for both physician and patient. The latter, rejoicing in his newly-recovered health, is apt to think that his old enemy is gone, and that he is equal to any amount of exertion, and that he may now compensate himself for the privations previously endured, and may once more begin to thoroughly enjoy life and its pleasures. Unless restrained in such impetuosity by the judgment of the physician, he will often have to expiate his indiscretion by more or less serious relapses, which might have been avoided if a better regimen had been followed.

ENURESIS (INCONTINENCE OF URINE).

Inability to retain the urine is a very common ailment in children, and usually relieved by proper medicines. In adults and aged persons it is frequently associated with nervous debility, when Electricity, applied to the spine and lower part of the abdomen, is generally followed by quick and permanent relief, provided the disease be not associated with organic disease of the bladder or kidneys, under which circumstances a suitable constitutional treatment would have to be instituted.

Persons labouring under this or any other affection of the urinary organs should carefully abstain from

the use of stimulants and tea, or the benefit obtained from Electricity or medicine will be found merely temporary ; experience having proved that a free use of milk is as beneficial in such cases, as stimulants and tea are injurious in their effects. How quickly some cases of long standing can be remedied by appropriate medicines and judicious diet, the following case will prove:—Mr. S., aged 74, had for many years been suffering from a most distressing irritation of the bladder, with incessant urging to urinate and the most scanty result. For eighteen years he had been in the habit of inserting a copper bougie every third day, “to keep the passage open” as he said. After a careful examination, I assured him of speedy relief from most of his trying symptoms, provided he would abstain from sherry-wine, of which he drank three or four glasses a day, and tea. Finding him willing to acquiesce, I gave him a small vial of Homœopathic medicine, and in three weeks had the satisfaction of receiving a letter of thanks from him, mentioning, among other symptoms of improvement, that he had never used the bougie since. Three years have since elapsed, and he remains as comfortable as could be expected of a man of his advanced age.

Another old gentleman of 72 years consulted me

respecting an inability to retain the urine longer than fifteen to twenty minutes during the day, and having to rise every hour during the night, which seriously interfered with his rest. As there seemed to be no signs of anything but local debility, I applied the Faradic current to the lumbar region and lower part of the abdomen, and with such prompt effect, that after a few applications he declined to continue the treatment, as he could retain it for two hours during the day without inconvenience, and was not disturbed more than once or twice during the night.

Although all cases do not so quickly recover, there are very few that are not more or less benefited by judiciously combined Electric and medical treatment.

HYDROCELE

is a disease by which the scrotum becomes gradually distended with a serous fluid, so that it acquires somewhat of a pear shape. It is met with in infants as well as old men, and is occasionally mistaken for rupture. Till quite recently, the treatment has consisted in drawing off the fluid and injecting port-wine, or diluted tincture of Iodine; an operation connected often with severe pain, and frequently resulting in failure; the sac gradually filling up again. Of late it

has been discovered that the use of Galvanism is far less painful and more generally successful.

STRICTURE.

We are indebted to two French physicians for the method of applying Galvanism to this annoying and sometimes very distressing affection. One operation is usually sufficient to effect a cure in ordinary cases, and as the application is rarely attended with much pain, this method is gradually superseding all others.

SPERMATORRHŒA

is an abnormal escape of the seminal fluid, that constitutes a very troublesome complaint, attended by symptoms pointing to a profound disturbance of the central nervous system.

Abuse of the genital functions is the most fruitful cause of this affection, and persistence in such abuse invariably causes exhaustion of the nervous system, which in its turn is followed by general debility, nervous irritability, with a dreamy, absent kind of manner, indigestion, flatulence, constipation and other signs of dyspepsia. Sight and hearing become impaired, the memory fails, palpitation of the heart, giddiness, follow in course of time, resulting at last, in

extreme cases, in epilepsy, consumption, impotence and insanity.

Seminal losses occur in the form of nocturnal emissions, or when straining at stool, or the fluid escapes imperceptibly with the urine. In the latter instance, the danger is all the greater, because it may occur for a long time without the person being aware of the loss; attributing his languor and inability to work to any cause but the real one.

Although this enervating complaint is a very prevalent one, it has been greatly neglected; medical men preferring to pooh-pooh it or ignore it altogether; whereas it ought to receive the attention of the first and best minds in the profession, as it is the disease that destroys many of the finest and noblest of our youths. The great difficulty in treating it successfully has no doubt had its share in influencing many medical men to *pretend* to overlook it, or treat it in a slighting manner, but the large number of young men we daily meet with, bearing the marks of general debility, too plainly testify to some widespread and generally prevalent cause, that should demand the most serious attention of the philanthropic physician.

Most of these young men are rather to be pitied than blamed. The error was committed in ignorance,

and having become acquainted with its evil consequences, they abandon it, but the results follow them for years, sometimes to the grave; nor does the evil stop there, as attested by a delicate and enfeebled offspring.

Should these few lines have the effect of rousing the minds of parents to the *actual* and *immediate cause* that produces a disease which, like a widespread pestilential plague, undermines the present race, lowering its physical and mental standard, I shall be happy to think that I have done some little good in my day and generation.

The cause of Spermatorrhœa is too well known to require any further reference, but there is a point towards which I would draw attention, as I consider it a matter of such vital importance that I cannot pass it over in silence.

As I have already stated, the error that tends to produce Spermatorrhœa is usually committed in ignorance. How is it then, that the consequences cling so pertinaciously to its victims after the error has been abandoned? If a man has been addicted to the use of tobacco or stimulants and becomes wise enough to abstain from them, the injurious effects gradually disappear more or less, and his health is compara-

tively restored; but with regard to the above-named error, such improvement is rarely experienced, and why? Nothing exists without a cause, and in this instance the cause must be a very common one, or its effects would not be so general. Richly-spiced food may have something to do with keeping up the irritation, but this alone would not satisfactorily account for it. There is one article of diet to which my attention was drawn some seventeen or eighteen years ago, and time has only served to convince me that it is exerting a baneful influence upon people in general and sufferers from Spermatorrhœa in particular,—and that is TEA. It is unfortunately not known, that owing to its action upon the lower portion of the spine it produces at first a stimulating effect upon the sexual organs, which is followed by an opposite or relaxing condition, thereby hindering them from regaining their tone. *The use of this beverage is, in my opinion, the principal cause of the difficulty in treating Spermatorrhœa.*

As I purpose to devote, further on, a few pages to an explanation of the influence of coffee, tea and stimulants upon the human frame, I shall merely add, that unless tea be entirely abstained from, a cure of Spermatorrhœa need not be looked for, and it is useless to expect

Electricity to tone up organs laboring under the combined influence of debility and excitability, while an article of diet having an exciting and subsequently debilitating influence on the organs is in daily use.

Electricity has proved very valuable in the treatment of *Spermatorrhœa*, the Faradic current being applied generally, for the purpose of toning up the system in general, and improving the digestive organs, while the Galvanic current is directed locally in order to arrest the disastrous losses. This desirable result, however, can only be expected when the Electric treatment is assisted by a nourishing but non-stimulating diet and the maintenance of proper moral control.

Should *Spermatorrhœa* exist for any considerable length of time and to any serious extent, it is apt to cause

IMPOTENCE.

By this term I mean inability to perform the generative act.

Greatly reduced sexual power is so distressing even to those who may be called reasonable men, that it should claim the most serious attention of the physician in order to discover whether the impotence, complete or incomplete, be real, or due to ignorance or

some nervous disorder,—or whether to no impotence at all but only a hypochondriacal fear or false persuasion of it.

It is frequently met with in persons suffering from excessive anxious mental work, with “jaded brains,” and in connexion with some forms of dyspepsia: but in these cases it is only temporary; rest, improvement of the general health and the judicious application of Electricity being sufficient to effects its speedy removal.

Although there are numerous physical causes of impotence and decrease of sexual power, such as sexual excesses, particularly when they have been indulged in at a premature age, venereal diseases, affections of the testes and prostate gland, etc., etc., yet from all these causes together the cases are less frequent than those due to nervous disorder or to mental defects; and the impotence which is complained of, or dreaded, without any reason, is more common still.

The mental and nervous defects which may render a man impotent are so various in different persons as to render it a most troublesome disease to treat; and it is only where the physician obtains control over the mind and habits of the patient that a satisfactory result can be obtained. Owing to its acknowledged

power over the nervous system, Electricity is looked upon with great favor in the treatment of this distressing complaint, but a cure is only to be expected where the mental, moral and physical habits of the sufferer are brought into harmony with the requirements of Nature.

STERILITY,

or barrenness, is an incapacity for conception. It most frequently arises from Amenorrhœa, Dysmenorrhœa, displacement of the womb, or some other functional derangement of the sexual organization, and is usually removed by the appropriate treatment of the disease upon which the sterility depends. Occasionally we meet with cases in which no derangement is apparent, and in these the Galvano-Electric Bath still holds out hopes of success after every other kind of treatment has failed.

FEMALE COMPLAINTS.

THERE is a class of diseases which, owing to its being peculiar to the female sex, is known under the general appellation of *Female Complaints*. These diseases, being mostly the result of a relaxed state of the system, are particularly amenable to Electric action, and when its merits are fully recognized and established, women will consider it in the light of “a God-send,” saving them, as it does, from those examinations which are as distressing to the patient as they are disgraceful to the physician.

Many true-hearted medical men of mature years look with feelings of horror, mingled with pity, at the treatment that has been instituted with regard to women's complaints during the past twenty-five years; but being in the minority they fear to raise their voices against a practice based on error and fraught with the most pernicious results. Some years ago, the superintendent of one of our lunatic asylums was bold enough to express his objections to the local treatment of diseases peculiar to women, and in his annual report warned young physicians against such practice;

but his advice and admonitions fell flat before the power of those who upheld the system. From the experience of nearly thirty years' study and practice, I am fully convinced that in nineteen cases out of twenty the examinations to which women and even young girls are subjected, in the present day, are not only unnecessary, but most detrimental to their mental, moral and physical welfare.

DYSMENORRHŒA (DIFFICULT OR PAINFUL MENSTRUATION).

Menstruation is sometimes attended with difficulty and pain of a distressing kind, which is referred to the lower part of the abdomen or the back, and often causes the person to remain in bed, where she rolls about in agony, and is troubled with nausea or sickness, loss of appetite, diarrhœa and chilliness. This state is, however, seldom attended with fever. Painful menstruation occurs at all ages, from the first establishment of the function to its cessation. It happens to the married as well as the single, and is frequently the cause of sterility. The pain sometimes begins only an hour or two before the flow, at others it is troublesome for a day or two previously, and is relieved by the discharge. Although there are many

remedies which have a decided tendency to *relieve* these distressing and periodically returning pains, nothing has yet been discovered to equal Electricity in permanently *curing* them; the combined influence of the Faradic current and the Galvanic Bath tending to remove the congestion that usually accompanies them, and tone up the system in general, so as to prevent their return; that is, provided the symptoms are not connected with organic disease of the womb or ovaries.

LEUCORRHŒA.

This distressing and debilitating ailment is also known under the name of *fluor albus* or "the whites," and consists in a discharge varying in appearance from clear, colorless (resembling the white of an egg), to dark, purulent and even bloody. It is more general than any of the affections peculiar to the female sex, and may exist in connexion with a robust and plethoric, or with a relaxed and debilitated state of the system.

In the earlier periods of life it is frequently found to depend upon irritation of the spinal marrow; in later years often connected with ulceration (so-called) of the mouth and neck of the womb, and then affording

a plausible pretext for the local application of nitrate of silver and astringent washes which, if they unfortunately have the desired effect of arresting the discharge, are so frequently followed by far more distressing internal ailments.

Every physician of experience has met with cases of disease of the womb, ovaries, stomach or head that are clearly traceable to the suppression of Leucorrhœa by means of injections of lead, zinc, tannin or other astringents; and women cannot be too impressively warned against their use.

The constitutional symptoms which attend upon Leucorrhœa are at first so slight as scarcely to attract any attention; indeed so common is the disorder, that women have got into the way of regarding it almost as a natural state of things, which erroneous idea frequently leads to the permanent establishment of the disease.

When Leucorrhœa becomes chronic and aggravated by neglect or improper treatment, the complexion assumes that pale sallow unhealthy color so indicative of internal disorder, partial emaciation, indigestion, constipation, languor and general debility ensue, the menstrual flow becomes abnormal, the constant and abundant discharge breaking up the general health

and inducing Chlorosis, and occasionally even Consumption in young girls and sterility in married women.

In this, as in most of the ailments peculiar to the female sex, Electricity, in the form of the Galvano-Electric Bath, may be considered invaluable; not only on account of the permanent relief it affords, but because it saves them from those distressing examinations and local applications, as abhorrent to their nature as they are to decency and true scientific medication.

CHLOROSIS.

This disease is intimately connected with a state of anæmia, or deteriorated state of the blood, and is characterized by a dull complexion, dirty-white, or greenish color, hence the name of "green sickness." The menstrual function is either scanty and pale or altogether arrested; the patient complaining of that lassitude and want of mental or physical energy so characteristic of general constitutional derangement.

Under the influence of Electricity recovery soon takes place; the face loses its pale unhealthy hue, the lips and tongue regain their natural color, the spirits recover the buoyance of youth, and the menstrual flow returns to its normal condition.

DISPLACEMENTS OF THE WOMB (PROLAPSUS, ANTEVERSION, RETROVERSION).

The womb, having some latitude of motion in its natural condition, is liable to descend and change its relative position from various causes. The most common of these displacements is *Prolapsus, or Falling of the Womb*, too well known to the actual sufferer to require much description. The weariness and aching in the back, with indisposition to stand, the feeling of debility of the parts, the sensation of bearing-down in front, all aggravated by walking, the leucorrhœal discharge, increased menstruation and frequent micturition leave little doubt as to the nature of the ailment. These symptoms are more or less marked, according to the lighter or more aggravated nature of the case. A slight relaxation may exist for a long time without attention being called to it; but, of course, the longer the treatment is delayed the greater becomes the evil, and the more difficult the cure.

The most prominent cause of the falling of the womb is a relaxed state of the peritoneum and ligaments that support the womb; which weakness corresponds with the debilitated tone of the rest of the system, to which may be added the more immediate causes, such as straining, lifting heavy weights, etc., etc.

Impaired vital power being the principal cause of this common complaint, it may naturally be inferred, that Electricity, in its varied forms, ought to act beneficially; and when carefully and judiciously applied, the results are usually of a most satisfactory nature. The Faradic current is the one most frequently employed, though the Galvanic Bath is at times indispensable for relieving the irritable and engorged state of the womb.

In *Anteversion* (bending forward) and *Retroversion* (bending backward) of the womb the general symptoms resemble those of falling of the womb; nervous irritation and local inflammatory-congestive condition of the organ being, more or less, present in all cases. The distinctive symptoms are, however, usually sufficiently marked to render those painfully distressing examinations unnecessary. The irritation and congestion are best relieved by the Galvanic Bath, and as soon as the parts have been restored to their normal condition of strength, by means of the Faradic current, the organ regains its position without the aid of uterine sounds or pessaries.

HYSTERALGIA

is a term that has been applied to an irritable state of the womb, independent of inflammation. The symp-

toms which distinguish the disease, are pain round the pelvis, dragging sensation in the back, or a tight feeling in the lower part of the abdomen from hip to hip as of a cord stretched across the pelvis at the brim, extending to the groins, at times down the thighs, often to the foot on one side. It renders the patient nervous, thin and irritable, abounding in complaints, frequently confining her to the sofa and rendering her incapable of any exertion without aggravation of suffering. The pains are generally worse during the menstrual flow, they are relieved by the recumbent posture, but never altogether absent, and occur in paroxysms of more or less severity. Sitting is sometimes painful, and the vibration caused by riding in a carriage over a rough road, or by any other jar, occasions great sufferings which last for hours.

Under the ordinary course of medical treatment, this disease is very obstinate, and is too frequently aggravated by local examinations. One lady who was under my care some years ago, told me that for months her life had been one of protracted misery. The doctor came every Thursday to apply the caustic to the womb, the result of which was intense pain that lasted till the Sunday following; the subsequent days being passed in less pain, but in mental dread of the dis-

travelling ordeal to be again gone through the next Thursday.

In less than a month after commencing the Electric treatment she found herself able to walk and ride without any pain or distress, and this happy result was obtained without any local application whatever. The disease being dependent upon a deranged condition of the nerves connected with the womb, all that was required was a treatment calculated to allay irritation and tone up the system, the former being effected by the Galvanic Bath, the latter by the Faradic current; proving the truth of Abernethy's maxim, that "Irritability was little more than Debility excited."

HYSTERIA

may be considered a functional disturbance of the nervous system. It is principally met with in young and middle-aged women, who feel acutely and are liable to strong emotions, if made to suffer mental agony or prolonged physical pain. It is not confined to any class of society, though more frequent among ladies in the higher ranks, owing to the more artificial life they lead.

It is almost always a chronic disease, the symptoms of which are developed in a very regular manner. At

first the complexion becomes pale and sallow, the patient loses flesh and complains of headache, the result of restless, unrefreshing sleep. The appetite is fanciful, with a craving for water, vinegar, salt or confectionery. Constipation is usually present, the bowels not moving more than once or twice a week, or sometimes even less often. There is much rumbling from accumulation of gas in the intestines. The pit of the stomach is tender to pressure, but better after meals. Almost invariably there is pain in the left side of the chest, which they imagine to be a symptom of heart-disease. Pain and weakness of the back are constant symptoms. Menstruation is irregular. The blood is impoverished, the pulse being quick, small or feeble. There is always great nervous excitability, alternated with lowness of spirits, and inability to fix the attention on any subject, a fondness for sensational novels, concerts, balls, etc., to the neglect of the graver duties of life.

Convulsive attacks are frequent in hysterical women, and are sometimes confounded with Epilepsy ; a mistake to be carefully guarded against.

Hysterical attacks almost always occur after painful emotions, while Epileptic fits come on apparently without any exciting cause. In the hysterical attack, the

loss of consciousness is preceded by a feeling as of a ball in the throat with a sensation of suffocation, while in the epileptic there is no such symptom. The hysterical patient has almost always time to find a suitable place upon which to fall, whereas the epileptic falls down as if struck by lightning, no matter where he may be. The end of the hysterical attack is usually a fit of crying and sobbing, while at the end of the epileptic fit, the patient falls into a deep sleep.

When we consider that Hysteria is a purely functional disturbance of the nervous system, it will be easily understood why Electricity has proved so useful in permanently curing it. No other remedy acts as successfully in relieving the symptoms, and by raising the tone of the system, a relapse may be prevented and health restored,—provided always that the general mode of life is not such as to again lower the nervous condition.

The following case is an excellent illustration of the disease, and of the manner in which it may be mistaken for another:—Eliza M., a delicate, pale-faced girl, was one day carried into my office and gently placed on a chair. From her mother's account, she had been suffering for seven or eight months from excruciating pains in the left foot and ankle. The

medical attendant had pronounced it chronic rheumatism, but had failed to afford more than temporary relief. From the debilitated appearance of the girl, coupled with the absence of all swelling, I was led to think that the case might be one of hysteria, and the dread she evinced at the idea of my touching it, strengthened me in this opinion. Taking her foot carefully in my left hand as if I only intended to look at it, I drew off her attention to a number of casts of heads placed in different parts of the office, at the same time gradually increasing the pressure of my manipulations. The comparative freedom from pain on gradually augmented pressure proved to me that the case was one of Hysteria and not Rheumatism, and I did not hesitate to assure the parents that a few days' treatment would make a very great change in her, and that a three weeks' course of Electricity would completely cure her. In order to give them a proof of its efficacy, I at once placed her foot in a warm bath, connected with the negative pole, and passed a sponge, attached to the positive, gently down the spine, employing the Faradic current. The result was immediate relief, and the very next day she was able to walk from the waiting-room into the office without assistance, and a few days later she walked

to my office from a distance of more than a mile. This could not have been done had the case been one of Rheumatism.

As her general health was greatly reduced, I continued the treatment for three weeks, after which she returned home full of life and spirits, with a healthy glow on her face and all trace of pain or weakness of the ankle removed.

Marvellous as the cure seemed to the parents, it was really nothing but what might be expected from the action of Electricity. The affection of the ankle was merely a local manifestation of a state of anæmia or bloodlessness of the brain and spinal cord, and by restoring the general health and improving the functions of sanguification and assimilation, the general cause being removed, the local affection quickly disappeared.

N. B.—This is one of the cases that Vital Magnetisers make so much capital out of. Anyone possessing a fair share of animal magnetism might have relieved her as quickly as the Electricity did; the only question being whether the results would be as permanent as they were after the course of Electricity.

"TURN OF LIFE."—"CHANGE OF LIFE."

This period in the life of a woman is frequently ushered in by a number of distressing ailments, many of which may be relieved, if not entirely removed, by the judicious application of Electricity.

At the cessation of the menstrual flow, which usually occurs between the ages of 40 and 50, women are often troubled, more or less, with nervous irritability, flushes of heat, ringing in the ears, palpitation of the heart, nervous apprehensions, and other symptoms denoting some change that is going on in the system, and hence the term "Change of life."

While most of these complaints are amenable to the action of Homœopathic remedies, there is one state, more particularly met with in women of good constitutions who have led active lives, which is Corpulency, or a tendency to fatty degeneration generally, over which medicine exerts no beneficial action. Corpulency at the "turn of life" has hitherto been considered incurable. The increase in size is accompanied by shortness of breath after any exertion, pain in the sides and back, constipation, congestion to the head and chest, vertigo, or swimming in the head, etc., etc., and while their friends congratulate them on their stout

healthy appearance, they themselves know that they are anything but well, that they cannot walk any distance without fatigue and pain in the back ; household duties that formerly were a pleasure are now a burden, and they feel as if they were "going down hill." If they have ever suffered from falling or other displacement of the womb the trouble returns with greater severity ; leucorrhœa follows in time, and if they happen to fall into the hands of a professed gynecologist,* their troubles are attributed to the womb, and they are subjected to a treatment as trying to their feelings as it is wretched in the result ; feeling, as they invariably do, worse instead of better after every one of these distressing local applications.

In this condition of fatty degeneration, tumors hitherto benign are apt to take on a malignant character, hence the frequency of cancer at the "turn of life."

To persons suffering from this abnormal deposit of fat with its accompanying ailments, Electricity is invaluable, a short course of Faradic treatment combined with a few baths being usually sufficient to

* One who devotes himself exclusively to the treatment of female complaints.

make them feel "five or six years younger," as they term it. Nor is the relief thus obtained by any means transient, for with moderate care and attention to the commonest rules of health the improvement will last for years, and should the general health, from any unforeseen cause be again run down, a few applications of Electricity will again restore it to its normal condition.

I would not dwell upon this peculiar affection, which is more distressing than dangerous, were it not that there are hundreds of women in Canada between the ages of 40 and 50 suffering as I have just described; not actually sick, and yet anything but well. They feel that they have not the energy they should have, and yet their age is not such as to warrant their considering themselves constitutionally old or worn out.

Many such cases come under my care every year, and the relief they experience from Electricity is as pleasing to themselves as it is striking to their friends.

PALPITATION OF THE HEART.

Owing to the prevalent idea that diseases of the heart are extremely dangerous and often fatal, many persons, particularly such as labor under a depressed

state of the nervous system, are greatly frightened at the slightest appearance of pain or distress in the region of the heart, and it is sometimes very difficult to relieve their minds of groundless anxiety.

Palpitation of the heart is at all times a tormenting and depressing ailment and should therefore claim the earnest attention of the physician, but though sometimes connected with organic disease of that organ, it is far more frequently a mere symptom of some disordered state of the body or mind, such as dyspepsia, anæmia, nervous debility from sexual excesses, protracted nursing, late hours, insufficient rest, or the excessive use of coffee, tea or alcoholic stimulants, and a judicious course of treatment holds out, in such cases, every hope of a cure.

Being so frequently a mere result of impaired vital energy, it might naturally be expected that Electricity should exert a powerful influence in relieving it. The Faradic current, if applied to the upper and middle portion of the spine as well as to the epigastrium, rarely fails to act beneficially, but a judicious diet, careful mode of life, and a refraining from the original cause, be it mental, moral or physical, must be enforced if the relief is expected to be permanent.

DEAFNESS.

The causes of Deafness are too numerous to be mentioned in a work of this size. For all practical purposes, they may be divided into two classes, viz. : the *mucous* and the *nervous*.

The cases depending upon some chronic affection of the *mucous* membrane of the ear are most commonly met with in children and young persons, and are rarely suitable for Electricity, owing to the strumous constitution with which they are connected. Homœopathy possesses so many valuable remedies for this class of diseases, that a large majority of cases of deafness depending upon a deteriorated state of the mucous membrane of the ear are speedily and permanently cured by medicines alone.

We are frequently consulted for cases of deafness caused by an accumulation of soft or hard wax, the result of cold, producing an abnormal condition of the cerumenous glands. Careful removal of the wax at once restores the hearing, to the astonishment and delight of the patient, no further treatment being required.

Should, however, the deafness be caused by, or connected with, a dryness of the internal ear, and

there be a deficiency of ear-wax, Electricity will improve the condition of the ear and hearing ; for if the current be passed through the ear a sensation of warmth will be felt, followed by an increased secretion of wax, the secretion even re-appearing after having ceased altogether for many years ; and even thickening of the tympanum or drum of the ear may be removed by the same means.

In the adult we occasionally meet with cases that seem to be connected with some obscure affection of the throat. These, though sometimes cured, too frequently baffle our best endeavors ; still, a persistent use of Electricity, general and local, combined with appropriate constitutional treatment, affords the best chance of ultimate recovery ; great patience and perseverance being, however, required on the part of both physician and patient.

Persons suffering from chronic diseases are too apt to forget, that ailments of long-standing require a proportionate length of treatment to obtain the desired cure.

In deafness connected with disease of the mucous membrane, the use of injections of nitrate of silver, sulphate of zinc, tannin, and the like, is very objectionable, as they frequently do irreparable injury by

drying up the morbid secretion instead of removing it with its cause. Many persons date their deafness from the time that the discharge was stopped by some astringent injection.

The second class of cases, viz.: the *nervous*, which are dependent upon some disordered condition of the auditory nerve, are less frequently met with. Should the trouble be organic, by which we mean a permanent change in the structure of the parts, the chances of recovery are very slight, but if it be merely functional, depending upon mere suspension or inadequate supply of nervous influence, after continued fever or any depressing or exhausting cause, the Faradic current may safely be applied with great hopes of success; provided always, that the general health be attended to; a matter very frequently overlooked by many otherwise careful physicians.

A very common accompaniment of deafness, sometimes even more distressing than the deafness itself is

TINNITUS AURIUM (RINGING IN THE EARS, NOISES IN THE HEAD).

This very annoying complaint, though frequently connected with deafness, may exist without it. As a rule, it makes its appearance about middle age, and as

life advances, increases in intensity. While some compare the sounds to rushing of water, rustling of trees, etc., etc., others speak of them as ringing of bells, roaring, whistling, etc., being located either in the head or the ear, sometimes in both. Very often two distinct noises are perceived at the same time, one noise being continuous, the other appearing at intervals. The patient complains of a constant heaviness in the head, and would be willing to bear forever the hardness of hearing if he could be relieved of the distressing noises. At times the trouble is so slight as to be considered of trifling importance, but aggravated cases, by their depressing mental and moral influence, impair the functions of the brain, and several cases are on record where they have even led to suicide.

So great is the discomfort which it gives, that persons incurably deaf, and who are quite conscious of the impossibility of recovering their hearing, will still apply to be relieved from this haunting and most annoying symptom.

An eminent English aurist states :—"As chronic catarrh is the commonest form of deafness, so is tinnitus aurium the most frequent result or sign of it."

The origin of these noises was for a long time a

mystery and source of much speculation, but they have been clearly traced to the membrana tympani, or drum of the ear, and though hitherto deemed incurable, they are now, except when caused by large doses of quinine and iron, almost invariably relieved, if not entirely removed, by the careful application of the Faradic current directly to the drum of the ear, by means of the ear-speculum. The current should be very weak at first and gradually increased in strength.

VERTIGO (GIDDINESS, SWIMMING IN THE HEAD)

is an affection that requires the most careful consideration, for though often a mere result of gastric derangement, or so-called "biliousness," particularly in the spring of the year, from eating too much animal food and neglecting exercise, yet it is occasionally a symptom of more deeply-seated disease of the brain, the heart, the liver, or the kidneys, and a course of treatment that might be most judicious to the former would possibly prove fatal to the latter.

Sometimes it is caused by the suppression of hæmorrhages, such as hæmorrhoidal or menstrual, when it is apt to lead to Apoplexy. In such cases, the Galvanic Bath, by restoring the arrested secretion, quickly removes all danger.

Frequently Vertigo is found to be symptomatic of an exhausted state of the nervous system, resulting from anxiety, severe mental strain, the excessive use of tobacco or alcoholic stimulants, nursing too long, hæmorrhage, seminal loss, etc., when the Faradic current, combined with proper internal treatment and nutritious diet, would be the treatment calculated to prove most beneficial.

In persons advanced in years, vertigo is usually the forerunner of Apoplexy and Paralysis. Here Electricity, by imparting tone to the nervous condition, not only relieves the distressing symptom, but wards off the impending danger and thereby adds materially to the length of their days.

Where Vertigo is connected with organic disease of the brain, heart or kidneys, Electricity should rarely be resorted to, a carefully instituted medical treatment being more calculated to ensure success.

BLINDNESS.

Where the loss of sight is complete, Electricity, like every other treatment, holds out little or no hope, but where the sight is gradually failing from over-exertion of the eyes in reading or working on dark clothes, etc., or from the gradual decay of nerve power conse-

quent upon advancing years, Electricity may frequently be used to great advantage.

That the affliction of the sight is sometimes the result of a derangement of the system owing to a taint in the blood or of debility, the following two cases will plainly demonstrate.

Eliza C., aged 22, tailoress by occupation, had been working very steadily on black cloth for two or three years, when she noticed the sight of her right eye to fail. She continued, however, to work on with the left eye till that one gave out also, when, after trying two or three home and patent remedies she applied to me for advice. Concluding her case to be one of simple exhaustion of the optic nerve, caused by overstraining her eyes, I prescribed one of our usual internal remedies, urging at the same time complete rest for the eyes, out-door exercise, and such general hygienic rules as would be calculated to improve the general health. Finding no improvement after three or four weeks, I made a closer examination of her case and found that she suffered from profuse menstrual flow every two weeks. Thinking that the debility which naturally ensued from such a drain upon the system might possibly be retarding the action of the medicine she had been taking, I prescribed some

powders for this excessive flow. They had not only the desired effect but to my great satisfaction and her delight so completely removed the mist that had hung over her sight that, to use her own expression: "she could thread a needle again as well as ever." Electricity in this case would have been as useless as the medicine prescribed for the sight; the dimness of vision and mist not being, as I imagined, the result of straining the eyes, but the consequence of the unnatural drain upon the system.

The following case is an exceedingly interesting one, showing how the loss of sight may be caused by the retrocession of an eruptive skin disease. George D., a young farmer, about 26 years of age, consulted me respecting the gradual loss of sight of the left eye, which had grown so weak that he could hardly read No. 12 of Dr. Angell's test type. This was a matter of the most serious importance to him, as he had lost the sight of the right eye by an accident some years before. One of our best oculists had declared his case to be hopeless. On enquiring into his constitution, I found that he had suffered severely in infancy from scald-head and scrofulous sore eyes. My opinion was almost as unfavorable as the oculist's, but seeing his distress, I agreed to try what I could do for him, pro-

vided he would attend strictly to my advice and directions for some months, and come in regularly every four weeks to report any change that might occur. For the first five or six months the improvement was very slow, but still as there was some improvement, being able to read No. 9, we resolved to persevere. One day he came in greatly distressed at an eruption that had appeared on his leg, and was astonished at my assuring him, that so far from that being an unfavorable symptom, I felt sure that his sight would now rapidly improve, and so it was, for at his next visit he could read No. 6, and in three or four months more he was able to read the smallest type with ease. Had the Galvanic Bath been applied in this case, the cure would doubtless have been effected in half the time.

There are certain effects produced by the application of the Galvanic Current to the eyes which enable the Electric Physician to form some opinion as to the probability of a cure. If the positive pole of a pretty powerful galvanic current be placed upon the eyelid or brow and the negative to the back of the neck, a blue light will be perceived, but if the poles be reversed an orange; and the more profuse the flow of tears after a galvanic application, the more favor-

able the result to be anticipated. The same hopeful prognosis may be deduced from the perception of sparks by the patients.

Should, however, the above-mentioned signs fail to be produced under the action of the direct current after several attempts, there is little hope of benefit to be expected from further treatment.

DROOPING OF THE UPPER EYELIDS (Ptosis)

though not dangerous, is often sufficiently annoying to make relief desirable. Should it be caused by over-taxing the eyes, the Faradic current will soon effect a cure, by restoring the tone of the third nerve, but occasionally the affection is symptomatic of cerebral disease, and then becomes a matter of far more importance. Where such is the case, Electricity, except as a tonic to the system in general, is rarely suitable ; constitutional treatment, combined with rest from mental work, being more calculated to arrest the disease.

LOSS OF VOICE (APHONIA)

is either functional or organic. The first form is principally met with in hysterical women after repeated colds and over-exerting the voice, and as the trouble

arises, in such cases, from loss of power in the muscles connected with the vocal cords, frequently coupled with other derangements of the system, the general and local application of the Faradic current is quickly followed by permanent benefit.

Should the loss of voice, however, be the result of chronic inflammation or ulceration of the larynx, Electricity will not be found suitable; constitutional treatment being the only means capable of restoring the parts to a healthy condition.

Though we are greatly indebted to the laryngoscope for enabling us to recognize the various forms of throat diseases, still, its introduction has not been without drawback, as its use has led to an increased employment of local applications of nitrate of silver (caustic), etc., which are rarely productive of benefit, and too frequently ruin the voice for life.

TUMORS.

Tumors may be simply divided into two classes, viz.: *Non-Malignant and Malignant*; and though, in the majority of cases it is easy for the well-informed and experienced physician to distinguish the one from the other, still some are occasionally met with in which the most scientific medical men are in doubt as to their true character.

It is in tumors that quacks make their harvest, for with them every tumour, however simple, is a cancer. Some years ago a friend of mine, a physician in good standing, settled down in a small town where there was a notorious cancer-doctor. Having heard so much about him, he concluded to pay him a visit, to satisfy himself whether he really had any superior method of treating that dreadful disease. After introducing himself and explaining the object of his visit, to my friend's astonishment the quack made him an offer to sell out to him, being afraid that the Medical Council might prosecute him for practising without a licence. My friend appeared to listen to his proposal, and the quack took him to see some twelve or fifteen cases that were then under treatment. Of these, my friend found that only two were real cancers, the remainder being different forms of non-malignant tumors. On remarking this to the quack, he coolly replied:—"That's so, that's where I have the advantage over the regular doctors; every tumor that comes to me I declare to be malignant and therefore a cancer, and as not more than one in ten is really of that nature, if I succeed in curing the nine that are not cancers, I get credit enough to make up for the real cancer that I can do nothing for." This is the manner in which

the public are preyed on by such unprincipled men. I need hardly add that my friend declined to buy him out.

Non-malignant, innocent or benign tumors, as they are also termed, though at times painful and distressing, are not dangerous to life.

Malignant tumors, on the other hand, are such as have a tendency to destroy life, and ought to be attended to at once, as they are invariably associated with a diseased state of the blood. They should be considered as local manifestations of a general constitutional disturbance, and hence the folly of removing them with the knife or caustic. Such irrational treatment is like lopping off a branch under the idea of changing the character of the tree. *The only method that has ever proved successful, is to act upon the constitution generally, thereby modifying the local disease.*

As this is a matter very little understood and of vast importance to those suffering from ailments of the kind, I will append two or three cases as illustrative of *non-malignant* and *malignant* tumors. Some ten or twelve years ago a fine, healthy-looking young lady, about 22 years of age, consulted me respecting a small tumor near the nipple of her left breast, which

had been pronounced a cancer by some young doctor, whose eagerness to perform an operation was evidently greater than his experience of the disease. After careful examination, I assured her that there was not the slightest danger, that it was merely what is called "adenoid" and not malignant, and would easily be removed by proper treatment. Her mind was, however, so imbued with the idea of its being a cancer, and of the necessity of having it cut out, that I had the greatest difficulty in quieting her, and it was only on my promising that if it had not entirely disappeared within four weeks, I would remove it with the knife, that she consented to take the medicine. Before the month had elapsed, the tumor had entirely vanished under the action of a little Homœopathic medicine. But although this case was so easily cured by the use of appropriate internal remedies, there is little doubt, that a contrary treatment would have resulted in subjecting her to considerable distress, if not danger, and an operation would have been of very serious injury to her if she had later got married and had had children to nurse.

The following case will show how a malignant tumor may be arrested in its growth, become latent and yet return to its original malignant character owing to improper diet.

One of those kind-hearted ladies who consider it their duty to do all the good they can, in the course of one of her errands of mercy, met with a poor colored woman suffering from cancer and brought her to my office with the request that I should take her under my care. On examination I found that it was indeed a scirrhus or hard cancer of the left breast. Of the malignant character of the tumor there could be no doubt, the breast having dwindled away just in proportion as the tumor increased. I explained to the lady who brought her, that the woman's only chance lay in the use of such constitutional remedies as would modify the malignant character of the tumor and arrest its growth, when, if successful, it would become a hard, inert mass. After the first three or four weeks the tumor became stationary, and then in the next three months gradually decreased to about two-thirds of its size when first seen by me, the breast resuming its natural proportions, all pain having disappeared. I then told the old woman that I had done all that I could for her, and so long as she took care of her diet she need not fear a return, but that if she ever used alcoholic beverages of any kind, or green tea, the trouble would be sure to re-appear. Some months later she returned, the tumor having begun to pain her

again. On enquiry I found that she had had a pound of green tea made her a present by some kind but injudicious friend, and forgetting my injunctions had been drinking it pretty freely for several weeks. I prescribed the former medicines, but this time without benefit; the system being so saturated with the villainous compounds used to color the green tea, that medicine had little or no effect, and a few months later she died at the General Hospital.

I have often been asked why cancer is such an incurable disease. The answer is a very simple one. Physicians will treat it as a local disease, while it is a constitutional one. They will cut it out, ignoring its constitutional origin, instead of turning their attention to finding the proper remedies that modify the constitution and thereby remove the malignant nature of the disease, reducing it from a malignant to a non-malignant one. Many a case have I treated in this manner with perfect success, but in order to obtain these favorable results, the case must be taken in hand before the system has been injured by large doses of inappropriate drugs, or the tumor irritated by salves applied under the vain delusion of scattering it. The following case may be a warning to some of those who have faith in salves. Some twelve or fifteen years ago

I was attending a poor German girl in the house of a kindhearted middle-aged woman who had acted the part of the good Samaritan, in offering her a home, when one day the woman asked me to look at her breast and give her my opinion respecting a small tumor not larger than a hazel-nut near the left nipple. I explained to her that it was not malignant, but that owing to her being just at the "turn of life" it would require very careful treatment, as such tumors were very liable, at that period, to take on a malignant character, and in fact turn into a cancer. For several months she followed my advice, the tumor remaining stationary and causing her no annoyance, but unfortunately, one day a young doctor was attending one of her boarders, and as it would cost her nothing she thought it might be as well to have his opinion on her tumor. Acting upon the erroneous knowledge acquired at college, the young doctor urged her to scatter it, and prescribed the necessary salve, but so far from its producing the desired effect it soon increased to four times the size, owing to the irritation of the rubbing and the exciting action of the salve. Feeling uneasy, and not liking to come to me after having acted contrary to my advice, she consulted another physician, but unfortunately of the same erroneous opinion, who

prescribed precisely the same treatment, merely substituting a still more irritating salve, the result of which was an increase in the size of the tumor. She now returned to me and acknowledged her error in giving up my method of treatment and requested me to take her in hand again. On examination I found that the tumor which was formerly not larger than a small marble had, under the improper treatment, become as large as an egg, and much to my regret I felt compelled to inform her that treatment was useless, as the injury was irreparable. She then put herself under the care of a quack who promised to eat it out with a salve composed of hog's lard and white-lily root, but before the tumor was out, the woman died of exhaustion.

Electricity has repeatedly been used with benefit in the treatment of tumors, but our experience has been too limited to warrant its being used alone, carefully selected constitutional remedies being always required; the Galvano-Electric Bath, and the pure Galvanic current, by means of simple plates of silver and zinc, frequently affording material assistance. Ample experience has proved, that the removal of a cancer by means of the knife or caustic is invariably followed sooner or later by a relapse, thereby causing an im-

mense amount of unnecessary suffering, besides shortening the life of the patient. An old physician of Lower Canada who has had a very extensive experience in this disease, states that he has removed over 200 breasts for cancer, and solemnly avers that if he had his time over again he would not remove one. On the other hand, Homœopathy has cured many cases, and aided by Electricity and Galvanism, holds out the best hopes we have in the present day for arresting or alleviating this terrible disease.

GOITRE (BRONCHOCELE)

is a tumor too well known to require description. It may be cured by Electricity, but unfortunately patience and perseverance are indispensable, and hence it is that the majority of persons suffering from this ailment prefer the temporary relief afforded by the application of Iodine ointment, to the detriment of their general health, rather than strive for the more permanent results obtained by the persevering use of Electricity and Homœopathy.

NÆVUS ("MOTHER'S MARK")

is a small tumor, or growth, formed by enlarged and dilated bloodvessels, for the removal of which the

Direct Galvanic Current is strongly recommended on account of its simplicity, rapidity and effectiveness. Gilt needles connected with the negative pole are inserted into different parts of the nævus, while the positive pole with the sponge-holding electrode is applied to an indifferent part in the neighbourhood. In a few seconds bubbles of hydrogen gas are seen issuing around the point of each needle, while the portion of the tumor immediately adjoining the needles becomes livid, changing to a dirty white. No hæmorrhage ensues and no dressing is required; the crust formed dries and falls off after a few days, leaving, in the case of small nævi, no mark, and in the case of larger ones only minute white scars.

ULCERS.

An ulcer, like a tumor, is but a local manifestation of a generally diseased organism, and to cure it radically and scientifically the remedies should be directed more towards the general than the local condition.

Where impoverished vitality is the cause, the general application of Electricity in the form of Faradism will be found beneficial in restoring the system to a healthy condition and then the ulcer will heal up spontaneously, but if it be the result of a

specific poison in the blood, proper internal medication will be found absolutely necessary to obtain a cure, though the Galvanic Bath may still be employed as an adjunct.

BED-SORES.

There is one kind of ulcer frequently met with in patients long confined to their beds, and therefore very properly termed "bed-sores," which has hitherto been found very difficult to manage, but by the aid of Galvanism it is astonishing how quickly it may be cured. A thin plate of silver, rather larger than the sore, should be placed immediately over the ulcer and connected with a plate of zinc by means of an insulated wire; the zinc to be placed upon any adjacent part, and if the action be found insufficient, it may be increased by covering the zinc plate with a piece of cotton cloth moistened with salt and water. A few days usually suffice to heal a sore that would otherwise have been a source of distress to the patient for as many weeks.

RHEUMATISM.

In the acute form, which is characterized by high fever and painful inflammation of the joints, I do not recommend Electricity, as I am satisfied that Homœ-

opathic remedies are infinitely more reliable ; but in the sub-acute and chronic forms, Electricity, owing to its vitalizing and purifying effects upon the human system, has long since established its claims as a very valuable remedy.

Though sub-acute and chronic Rheumatism are sometimes considered sequelæ of acute Rheumatism, they are more frequently distinct constitutional affections ; based, like all chronic diseases, upon an impaired condition of the vital powers, or upon some taint in the blood—often upon a combination of both. They are rarely met with in infancy or youth, owing to the recuperative powers of Nature being on the ascendant during the earlier periods of life, but as middle age advances they occur more frequently, sometimes locating themselves in the muscular tissues of the loins in the form of

LUMBAGO,

or on the envelope of the nerves as in

SCIATICA,

or affecting the fibrous textures about the joints, causing pain, stiffness and swelling, culminating in what is termed

RHEUMATIC GOUT,

when, owing to the action of the muscles being impeded, atrophy of the limb takes place, ending at times in

RHEUMATIC PARALYSIS.

In *Lumbago*, the application of the Faradic current is quickly followed by relief and cure.

In *Sciatica*, both forms of Electricity have been used with benefit, but where the limb is atrophied, the Faradic current is always required to restore the attenuated muscles to their normal condition. These two last-mentioned diseases are very commonly connected with a loss of phosphates, and until this drain upon the nervous system is arrested, a permanent cure cannot be effected.

In *Rheumatic Gout*, the results of Electricity have not proved as satisfactory as might have been expected. Some cases recover quickly and permanently, while others, though as carefully treated, derive very little benefit. Others again seem to be doing very well for a time, but the slightest indiscretion causes a relapse, when the patient, instead of patiently following up the treatment, applies to some other physician

for relief, a proceeding not to be wondered at, when we consider the constant gnawing pain they suffer. Satisfactory results are rarely obtained unless a careful and judicious course of internal treatment be adopted in conjunction with the Electricity.

But if Rheumatic Gout sometimes baffles our best endeavors, *Rheumatic Paralysis* is a form that is nearly always treated with success; and where Electricity is combined with Kinesipathy, or the movement cure, the most brilliant results are obtained; the stiff, contracted joints soon regaining their natural action, and the attenuated muscles recovering their original size and strength.

PRURIGO AND PRURITUS.

These two terms are employed to denote *intense itching* of the whole surface or of certain parts of the body. The former is usually applied to the disease when affecting the whole frame, while the latter refers more particularly to an intensely distressing itching of the anus or adjacent parts.

The Galvanic Bath, combined with judicious diet and appropriate constitutional remedies, enables us to give permanent comfort where formerly only temporary relief could be obtained from the use of lotions, salves and other external applications.

“NATURE'S OWN TONIC.”

In the foregoing pages I have endeavored to furnish my readers with a short but reliable description of the action of Electricity upon the human frame, and the diseases in which it has been found, by actual experience, to act beneficially. The extraordinary power that it exerts upon the nervous system, particularly when in an impaired condition, has gained for it the title of “Nature’s Own Tonic,” and certainly nothing has yet been discovered that can be at all compared with it in restoring vital energy ; and the rapid strides that it has made in public estimation during the last few years most clearly demonstrate that it is just what is required in this age of excessive nervous taxation.

CONCLUSION.

IN conclusion, I will offer a few words of advice to those who are desirous of improving their health and willing to make some sacrifice to regain it, if it has become impaired.

The immediate causes of many of our sufferings lie much nearer than people imagine. Few are willing to believe that a large proportion of our ailments are the result of a constant use of *Coffee, Tea, Tobacco* and *Alcoholic stimulants*; but such is really the case; and although I have too frequently found it a hopeless task to persuade persons to abandon what they know and feel to be injuring them, still the occasional satisfaction that I have had of seeing some few derive benefit from my advice, prompts me to enter into a few details respecting the above-mentioned injurious articles; and I will merely state, that my convictions respecting them are the result of thirty years' actual practical experience; that anyone inclined to test the truth of my assertions, may easily do so, and the more carefully and the longer the investigations are carried on, the more fully will it

be evident, that what I have written regarding them is "Truth, all Truth and nothing but the Truth."

COFFEE,

as we all know, is a most agreeable and exhilarating beverage for breakfast, and were it not for the injurious consequences that follow its continued use, many, who have been compelled to banish it from their tables, would gladly continue to drink it. The stomach is the region that it would seem principally to affect, producing, sooner or later, *Indigestion*, *Heartburn*, *Flatulence*, *Palpitation of the Heart*, *Swimming in the Head*, *Constipation* and the host of disagreeable symptoms known under the term of *DYSPEPSIA*. It therefore stands to reason, that persons who suffer from ailments of the kind should strictly abstain from using a beverage that has a tendency to produce them in a healthy person. If ever a person comes to me complaining of pain and distress in the pit of the stomach, my first question is: "Don't you drink Coffee?" and the answer almost invariably follows: "Yes, and I like it strong." One old gentleman of my acquaintance, who suffers from time to time from this pain, has been ordered by his physician to smoke, in order to relieve it; and to a

certain extent it does allay it, and as he is as fond of his pipe as he is of his Coffee, he finds great satisfaction in following his Doctor's advice. But though nature may be soothed for a time, she invariably claims her rights in the end. An old gentleman once very truly remarked: "We may break the laws of God and be forgiven; we may break the laws of man and be forgiven; but the physical laws never can be broken with impunity."

Persons who suffer from any disease of the stomach should therefore carefully avoid COFFEE.

TEA

contains an active, penetrating principle that excites the nervous system, and hence its well-known enlivening, refreshing and exhilarating effects upon the human frame; but as it contains no nutriment, this exhilaration is obtained *at the expense of nerve power*, resulting sooner or later in NERVOUS DEBILITY.

The celebrated Dr. Lettsom in a work entitled "The Medical Qualities of Tea and Effects of Tea-Drinking," published over a hundred years ago, gives the result of his observations and experiments in the following words: "It has contributed more or less its share towards the production of those low nervous diseases

“ which are now so prevalent. Among these causes,
“ excess in spirituous liquors is one of the most con-
“ siderable ; but the first rise to this pernicious custom
“ is often owing to the weakness and debility of the sys-
“ tem, brought on by the daily habit of drinking Tea ;
“ the trembling hand seeks a temporary relief in some
“ cordial, in order to refresh and excite again the
“ infeebled system ; whereby such almost by necessity
“ fall into a habit of intemperance, and frequently
“ entail upon their offspring a variety of distempers
“ which otherwise would not probably have occurred.”

On persons of tender and delicate constitutions its relaxing effects are quickly manifest, while those gifted with hardier frames drink it for a time with apparent impunity ; but yet invariably feel its baneful influence in the course of time.

If Dr. Lettson had already a hundred years ago noticed the increase of nervous complaints, what would he have said if his life had been extended to our times, when premature nervous exhaustion is one of the features of the age ; and this failure of nerve-power is intimately connected with some of the leading social problems of the day.

Forty or fifty years ago we rarely heard of mechanics striking for shorter hours and higher wages, and it

was a common thing to see them engaged in some active amusement such as ericket or base-ball after the labours of the day were over. Now the able-bodied mechanie is the exception, and were it not for the fresh importations from the old countries it would be difficult to obtain labourers to carry on our public works.

Among the farmers the demand for able-bodied men is becoming greater than the supply ; their own sons and daughters being usually unwilling to work the farm if any other employment can be obtained. How is this ? Is the climate of Canada of such an enervating character as to produce this gradual deterioration of the human frame ? Most certainly not, for if we have occasionally a hot spell in Summer, our long bracing winters are most invigorating, and well calculated to produce a high state of physical health. To what then are we to attribute this physical decay ? The hardy Scotchman comes to this country in full plenitude of human strength, but after having been out here for a few years he will tell you that he does not feel as strong as when he first arrived, and that he cannot stand work as he formerly could. And why ? If the climate is not at fault the food is the next thing that should elaim our attention. Has there

been any change in the mode of living ? On enquiry you will almost invariably find that he has exchanged his healthy nourishing porridge and milk for miserable white bread and tea ! and as exceptions usually prove the rule, so exceptional cases are met with where porridge and milk have been retained, and in these instances the general health of the men and their children has not only remained as rugged as before, but has even improved in Canada.

Ask a farmer what he feeds his cattle on and he will tell you to a fraction, but if you ask him what he gives his children, his answer will almost invariably be : “ Oh, anything that comes along ;” and the result of this attention to cattle and neglect of children is, that while the breed of Canadian cattle is improving, the breed of Canadian children is deteriorating.

Occasionally we meet with persons in whom the use of Tea seems to have produced no apparent injury, but look at their children and the truth of the Bible axiom is too plainly visible, that “ the sins of the parents are visited upon the children !”

Some years ago a lady whose personal appearance betokened excellent health, said to me : “ But, Doctor, don't you think you carry your objections to the use of coffee, tea, tobacco and liquor a little too far ? Look

at me; I have drunk coffee and tea all my life and occasionally beer and wine, yet I enjoy excellent health, and as to my husband, I don't think you can find a finer and healthier man in the city, notwithstanding his regular daily use of coffee, tea, tobacco, and stimulants of various kinds."

It is always painful for me to hurt anyone's feelings, and in this instance I felt particularly loath to do so, as the lady in question was one for whom I entertained the greatest respect; but regard for truth compelled me to answer her in a manner that cut her to the quick and turned a warm friend into an enemy. "Madam," said I, "I grant you that appearances are against me, and that in some instances it would seem as if the habitual indulgence in those articles is not necessarily followed by ill-health, but in your case the sins of the parents have fallen upon the children, for how can you otherwise account for the sickly children you have?" The shot went home, and deeply too, for her family is a very delicate one, each child being more so than the former, and the youngest boy almost an idiot. And thus it is, that people overlook effects because they do not immediately follow the cause.

But there is a still darker side to the use of tea that I would fain pass over, were it not that a sense of

duty compels me to mention it. Medical writers are too often backward in referring to affections of the sexual system, and hence the lamentable ignorance that prevails in the world at large respecting their functions. Some seventeen or eighteen years ago my attention was providentially directed to the action of tea upon the urinary and sexual systems, and each succeeding year's experience has strengthened my convictions of its baneful influence upon the human race, by engendering and maintaining an unnatural excitement of the sexual organs, and I do not hesitate in affirming that to the constant use of tea may justly be attributed much of the fearful sensuality that prevails around us. This is very easily understood when we reflect that tea exerts, first, an exciting and subsequently a debilitating influence upon the nervous system in general and the lumbar portion of the spinal marrow, commonly called "the loins," in particular. Why this is, I do not pretend to explain; all I know is that such is the case, and if those in the habit of using tea and suffering from the consequent *weakness and pain in the small of the back*, will only abstain from its use for three or four weeks, the relief they will experience will satisfy them of the truth of my assertions. Any one at all conversant with ana-

tomy and physiology will know that the urinary and sexual organs are more particularly connected with the lumbar portion of the spine, or loins, and if this part is brought under a stimulating influence, it is easy to conceive how the stimulation must of necessity extend to the organs themselves, causing an unnatural excitement that too frequently leads to those degrading solitary habits of youth that undermine the health of body and soul.

In young girls allowed to make a free use of tea, the catamenial flow is frequently ushered in two or three years before its proper time, which accounts for some not older than 11 or 12 beginning to menstruate in a climate where such a change in the constitution should only occur at 14 or 15.

Again, young men, if healthy and strong, naturally engage in athletic sports of some kind, to develop their frames and work off any superfluous vitality; but, under the enervating influence of the action of tea, we find them too frequently preferring the pipe and alcoholic stimulants, in order to obtain temporary relief from the lassitude engendered by its use, and therefore, so far from feeling inclined to join in pursuits that require strength or agility, they find it difficult to perform the ordinary requirements of their

various callings; or as mechanics we find them grumbling at ten hours' work, feeling exhausted before the time for "knocking off" comes round.

Among our domestics we meet with the same difficulty. One young woman objects to running up and down stairs because it gives her a stitch in the side; another cannot wash owing to weakness and pain in the back, while the mistress grumbles at the quantity of tea that is being used in the kitchen, to say nothing of occasional bottles found in the larder that have evidently contained something stronger still.

A year ago a young square-built girl came to me for advice and medicine for the backache. "Oh, Doctor," said she, "I shall have to give up my place and go back home, for I can't stand the work; it makes my back ache so badly." "Give up your tea," said I, "and you will soon lose your backache. There's no need of your giving up your situation." She agreed to follow my advice for a month, and after giving her a little medicine for her general health I dismissed her, never expecting to see her again, as my advice in such cases is rarely followed for more than a week. But, to my astonishment, she returned in a month, bright and smiling, and hardly had she time to get into my office before she exclaimed: "Oh, Doctor, I'm

never going to drink tea again. Would you believe it, I hadn't taken your medicine and given up the tea for a week before the pain was out of my back, and now I feel stronger than ever?" As I have not seen her since, I am in hopes that she has profited by the lesson, which is more than I can say of many another patient who, after being relieved of her backache, has returned to her tea—and consequent suffering.

While, then, the primary action of tea is to exhilarate and excite, its secondary effects are to enfeeble the nervous system and produce depression of spirits, languor, excitability, irritability, disinclination to active employment, weakness and pain in the back. These symptoms may be temporarily relieved by a fresh supply of tea, just as the trembling hand of the drunkard is steadied by a fresh glass of liquor, but only to be followed by increased nervous prostration; and this continued round of stimulation and relaxation naturally wears out the human frame long before the allotted time.

The loss of a few years of life would be a matter of less importance, were it not that premature decay of the nervous power is invariably accompanied by distressing ailments, such as nervousness, sick headache, dyspepsia, neuralgia, sleeplessness and its too frequent result, insanity.

It requires but little firmness and resolution to abandon its use, for its hold upon the human constitution is far less powerful than that of tobacco or liquor; the headache and nervous depression following its sudden disuse lasting but a few days at longest, to be speedily followed by a most gratifying increase of mental and physical vigour.

But, should those who are parents be unwilling to abstain from its use, I would plead for their children, the rising generation, who have their work before them. Why allow them to use an article of diet that will render them less fit for their duties in after life, to say nothing of the various temptations that it induces? It is just as easy to give a child a bowl of porridge and a slice of brown bread and butter with a cup of milk for breakfast, as miserable tea and white bread; for while the former will produce fine, stout, healthy boys and girls, perhaps a little boisterous and troublesome from exuberance of vitality, the latter will render them puny and precocious, and infinitely more troublesome from their aches and pains and fits of sickness.

From years of careful observation I have satisfied myself, and others too, that when a nursing mother drinks nothing but milk her child is far less liable to

diarrhoea in summer. This will easily account for the yearly increase of mortality among infants, particularly in the larger cities, where for one mother that drinks milk, five hundred or a thousand drink tea.

The only person to whom it seems to be of any benefit is the old woman who has passed the active years of life. Owing to the sensibility of the system being blunted by age and decay, the slight stimulus of a cup of weak black tea produces a sensation of pleasurable excitement that is not followed by any material injury; but to young persons it is *a curse*, and to the middle-aged *a delusion and a snare*.

TOBACCO

is a narcotic poison that should be strictly avoided by any young man who has any ambition to rise in the world. It is a nasty filthy habit, offensive to those around him; destroying his energies and rendering him lazy and indifferent. It exerts a depressing influence upon the heart and lungs causing an irregular action of the former, and a tendency to spitting of blood and even hæmorrhage of the latter, which makes it particularly dangerous for those whose heart or lungs are constitutionally weak.

It is usual for people to talk of smoking and drink-

ing as if they were linked together, and the reason is that too frequently the one leads to the other. Tobacco produces a dryness of the mouth, which calls for some liquid to moisten it. Water is too insipid, as the nerves of taste are half-palsied from the influence of the tobacco-smoke ; hence, in order to be tasted, something pungent or stimulating is resorted to. Tobacco also produces a feeling of depression and nausea, that is relieved by alcoholic stimulants. It is therefore a great inducement to habitual and excessive drinking of intoxicants.

How singularly and variously the human frame may be acted upon by Tobacco may be inferred from the following case : A West-Indian planter, passing through Toronto, called on me for advice on some trifling ailment, and in course of conversation mentioned that for twelve years he had suffered from a most distressing irritation of the bladder that had at last increased to such an extent, as to compel him to relieve himself every ten or fifteen minutes. Being unable to obtain relief from the physicians in the city where he resided, he went to England to consult some of the leading London physicians. The first question he was asked was how many cigars he smoked a day, to which his answer was "from 12 to 15." He was ad-

vised to drop smoking altogether for a time but would not consent, at last agreeing to reduce the number to three or four a day ; the result of which was complete relief in less than a fortnight of a distressing ailment that had annoyed him for over 12 years.

The late French Emperor Napoleon caused careful investigations to be made respecting the effects of Tobacco upon the young men attending the various colleges in Paris, and was so struck with the decided inferiority of those who were addicted to it, that he passed an edict forbidding its use in every school, college and seminary in France.

The opinion that Tobacco is useful in promoting digestion is altogether erroneous. If it be capable of soothing the uneasiness of the nerves of the stomach, occurring after a meal, that very uneasiness has been caused by some error in diet, and may be removed by other more appropriate means. If tobacco facilitates digestion, how is it, that after laying it aside most individuals get stouter ?

It is sometimes urged, that men occasionally live to an advanced age who are habitual consumers of tobacco. True, and so do some men who habitually drink whiskey, and occasionally get drunk ; and does it thence follow that whiskey is harmless or promotes

long life ? All that either fact proves is, that the poisonous influence is longer resisted by some constitutions than by others. The man who can live long under the use of tobacco and whiskey, can live longer still without them.

The human frame, by regular and persevering continuation of a habit, is capable of accommodating itself to impressions made by poisonous substances such as tobacco and liquor, so as not to show signs of injury under a superficial observation, provided they are slight at first and gradually increased ; but it does not hence follow that such impressions are not hurtful. It is a great mistake, into which thousands are led, to suppose that every unfavorable effect or influence of an article of food or drink, or luxury must be felt immediately after it is taken.

The tobacco appetite, though often difficult to acquire, is still harder to subdue. When once it has obtained the mastery, it is far more difficult to shake off than Tea or Spirituous liquors. “ Dr.” said an inveterate chewer to me, “ I’ll take a bucket of physic and pay you any amount of money if you will relieve me of this dreadful nervous depression and let me keep my tobacco.” He knew that his tobacco was killing him, but such was the miserable thralldom into which

he had been drawn, that he could not summon courage to free himself from it.

The reasons given by some persons for using tobacco are as extraordinary as they are amusing. One clergyman stated that he used it "to *prevent* his getting fat," while another smoked cigars to *make* him fat. One has a tickling in the nose calling for snuff, another a rising in his stomach if he doesn't smoke; another a dryness of his throat if he don't chew. One individual urged as a reason for chewing, that a man naturally required a little to sweeten his mouth after dinner. A respectable lady who suffered from a peculiar weakness of the eyes took snuff for eleven years without deriving any benefit, but satisfied herself with the idea that no doubt she would have been much worse if she had not taken it at all.

Many are ready to admit that it is filthy, disgusting and pernicious *generally*, but their own cases are peculiar, and to be regarded as exceptions; but if any young man asks an old smoker whether he would advise him to acquire the habit, he will invariably dissuade him from it.

The only person in whom the use of tobacco might be tolerated is the old man whose active years of life are over, and whose time hangs heavily on his hands,

but it should never be used by the young and middle-aged who have any ambition to rise and take a place among men, on account of its enervating influence upon the nervous system, its tendency to deteriorate mind and body and its proneness to lead men into the habit of using intoxicating liquors.

BEER, WINE, WHISKEY AND OTHER ALCOHOLIC STIMULANTS.

Until the prevalent but *erroneous* idea that alcoholic beverages such as Beer, Porter, Wine, Brandy, Whiskey, etc., are strengthening and beneficial to the human race is rooted out of the minds of people, temperance organizations, "Dunkin Acts" and the labors of philanthropic men will avail but little in stemming the tide of intemperance, disease and premature death that prevails around us. Novels and other light literature tend to maintain the idea by exciting narratives of exhaustion and narrow escapes from destruction by the timely aid of a "horn of brandy," and physicians themselves, who should know better, too frequently assist in propagating the notion that stimulants are strengthening by the reckless manner in which they prescribe them, notwithstanding the urgent remonstrances of so many of the leading physicians of the day to the contrary.

Sir Benjamin Brodie, Dr. Chambers, Sir James Clark, Dr. Marshall Hall and many of the most eminent medical men in England testified openly that:

“An opinion, handed down from rude and ignorant times, and imbibed by Englishmen from their youth, had become very general, that the habitual use of some portion of alcoholic drink, as of wine, beer, or spirit was beneficial to health, and even necessary for those subjected to habitual labor; whereas, anatomy, physiology and the experiences of all ages and countries, when properly examined, had satisfied every mind well informed in medical science, that the above opinion was *altogether erroneous*: that man, in ordinary health, like other animals, did not require any such stimulants, and *could not be benefited by the habitual employment of any quantity of them, large or small; nor would their use during his life-time increase the aggregate amount of his labour, but that in whatever quantity they were employed, they would rather tend to diminish it.*”

Sir Astley Cooper, the celebrated surgeon, also asserted:

“We have all been in *error* in prescribing Wine as a Tonic. Ardent spirits and poison are convertible terms.” The *stimulus* given is *not strength* and is

invariably followed by a *corresponding depression*, which *leaves the patient worse than at first*.

And yet, in direct opposition to the opinion of these men of undoubted learning and lengthened experience, we continually hear medical men talking of Beer as nourishing and Wine as strengthening.

Moreover, as if to prove the truth of the old proverb that "the devil could quote scripture for his own purposes," that sacred volume is used not only to excuse, but as an authority for drinking; but while the advice "to take a little wine for the stomach's sake" is repeatedly urged, very rarely do we hear the warning passage cited: "*Wine is a mocker, strong drink is raging, he that is deceived thereby is not wise*;" and even allowing that St. Paul's advice to Timothy may have been judicious in his day, the latter is undoubtedly more applicable to the state of society at the present time.

Whether a man drink ale, porter, wine or spirits, it is the alcohol that acts upon him, and the persistent effects of alcohol are mental and physical disease and premature death.

Many persons imagine that alcohol gives strength, and we hear feeble persons saying that they are "kept up by stimulants," whereas quite the contrary is the

truth, for they are in reality *kept down by them*. The sensation they derive from the immediate action of the stimulant deceives them and leads them to attribute *temporary good* to what, in the majority of cases, is *permanent evil*. During the first stages of its action it may enable a wearied or feeble organization to do brisk work for a short time ; it may make the mind briefly brilliant ; it may excite muscle to quick action ; but as it affords no sustenance, and does not replace the worn-out substance it must inevitably tend to ultimate destruction. Like a fire, it makes a brilliant sight, but leaves a desolation behind.

The first symptom that attracts attention, after alcohol has been taken, is increased action of the heart, it beats more quickly and the pulse rises, in proportion to the amount taken.

From careful computations by eminent men, it has been ascertained, that after taking one fluid ounce of alcohol the heart beats 430 times more during the first day. On increasing the dose to two fluid ounces the second day, it beats 1,872 times more, and the following day, after taking four fluid ounces, the heart beats 12,960 times more ; and yet in the face of such facts there are some physicians who will still assert that alcohol retards the waste of the human frame.

If a man were to walk up to an engineer and say : “ My friend, the more quickly you drive your engine along the road, the less will be the wear and tear,” the probability is that the engineer’s answer would be : “ My friend, if that is all you know about it, the quicker you shut up the better, for you are only making a display of your ignorance, experience having proved the very reverse.” Unfortunately for the human race it is more easy to prove the fact with regard to an engine, where the question of dollars and cents is involved, than in the comparatively less valuable life of a human being.

Those who have travelled in cold climates testify that *Alcohol destroys the natural heat of the body*, and therefore, “ to take a drop to keep out the cold ” is a grievous fallacy ; and one to which many a death has justly been attributed.

Alcohol is a dangerous instrument even in the hands of the strong and wise, and a murderous instrument in the hands of the foolish and weak. It destroys the vital organs, renders the course of the circulation slow, imperfect and irregular, suggesting the call for more stimulation, and by tempting the renewal of the evil ruins the mechanism of the frame long before the time for its natural decay. He who uses

it in so-called moderation frequently fails to recognize the deterioration that is slowly going on in him. He may perhaps complain of feeling more sensitive to the changes of the seasons, and looks anxiously for the return of the life-giving summer; the autumn is dreary to him and the first months of spring produce a feeling of depression and relaxation, but still he cannot imagine these feelings to be the result of the moderate amount of stimulants that he takes. Later, neuralgic, rheumatic or gouty pains, according to the individual constitution, torment him, and long before the natural period for cessation from active work has arrived the man is an old man.

Where alcohol has been used to greater excess, and organic disease has been produced, the result is the failure of some one important organ, such as *the heart, the lung, the kidney or the brain.*

Disease of *the heart* is commonly met with in those who use alcoholic stimulants, either in the form of fatty degeneration or dropsy; when life is rarely prolonged beyond a few months. It is a constant complaint of those afflicted in this manner that "nothing does them any good now," by which they mean that the stimulant once so efficacious in affording them temporary relief is at last a failure; when a mental

shock, a mechanical injury, an exposure to cold, a strain, too hearty a meal are sufficient to complete the wreck.

But if disease of the heart is frequently the result of alcoholic stimulation, *the liver* is still more commonly affected. An old Scotch physician who had frequent opportunities of examining the bodies of so-called moderate drinkers, affirms that he never found one whose liver was not more or less diseased.

Under the action of alcohol the liver first becomes enlarged, but after a time a contraction ensues, a slow shrinking of the whole organ, till it becomes a shrunken, hardened, roughened mass, to which the expressive term of "hob-nailed" has been applied. By the time this change has occurred, the body is usually dropsical, owing to the obstruction offered to the returning blood by the veins, and death is certain.

In those addicted to stimulants, *the lungs* seem to be less liable to disease than the heart or liver, particularly in youth, but middle-aged persons are occasionally met with who are not considered drunkards, but are constantly more or less under the influence of liquor of some kind. Owing to constitutions naturally good and strong, they live apparently uninfluenced by any disease, but this wonderful health is, however,

after all, only apparent. Subjected to any excitement or unusual fatigue they break down suddenly, when the rotundity of the frame quickly disappears and their clothes hang like sacks on the emaciated body. Sharp, stinging pain in the side is usually the first indication of failure of health; after a time the pain becomes continuous, and when it subsides, oppression of the chest is complained of; hæmorrhage from the lungs follows, and the downward course to the grave is as quick as it is certain.

There is no form of consumption so fatal as that of alcohol. So gradually, but so thoroughly, have the vital powers been sapped, that medicine affects the disease but little, the most judicious diet fails, change of air accomplishes but slight real good, and Electricity only hastens the end. Death may be delayed, provided the constitution has not altogether been destroyed, but no remedy has yet been discovered that has any lasting effect upon alcoholic phthisis.

Under the deteriorating influence of alcohol *the kidneys* suffer much in the same manner as the liver. Their structure undergoes a fatty degeneration which in course of time passes into contraction, or its membranes permit the albumen to pass through them, when the body loses its power as if it were being gradually

drained of its blood. This condition of disease is known under the popular term of "Bright's Disease."

Calculus, or *stone in the bladder* is intimately related to excessive use of alcoholic beverages, particularly of *malt*. No one who indulges, even temporarily in alcohol can fail to observe how soon the indulgence gives rise to an unnatural secretion of urine; to a fine deposit of pinkish sediment, and to the occasional production of a fine film on the surface after the urine has stood a little while. This is a condition favorable to the formation of stone, and the prudent man will at once abstain from continuing the cause.

The effect of alcohol upon *the eye* has not yet received the attention it deserves. That the lens, the great refracting medium of the eyeball, may be rendered opaque, and the disease called *Cataract* produced by its means, may be inferred from the frequency of that ailment as well as *Amaurosis* that is met with in those suffering from Bright's Disease.

SLEEPLESSNESS.

It is a well-ascertained fact, that during natural sleep the supply of blood in the brain is reduced in quantity, and that when the vessels are filled with blood, without extreme tension, the brain remains

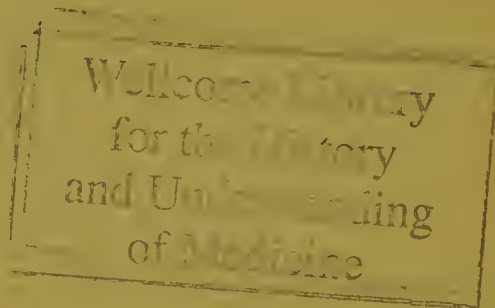
awake; but when the vessels are over-distended or engorged, a state of insensibility or coma is induced, which is not natural sleep, but partakes rather of the nature of apoplexy. This unhealthy sleep is attended with embarrassed breathings, blowing expirations, deep snoring and uneasy movements of the body, from which the apparent sleeper wakes tired and unrefreshed. The effect of alcohol on the brain is to produce, after a time, relaxation of the vessels, to keep them full of blood, and so to prevent natural repose, and in consequence the sleepless man tosses around troubled with disconnected trains of thought, until too frequently he rises to take an increased dose of stimulant, or flies for temporary relief to some narcotic to produce a state of congestion and stupor, to the certain aggravation of all those distressing symptoms that lead so frequently to *Apoplexy*, *Epilepsy*, *Paralysis* and *Insanity*.

Of *Delirium tremens*, when the imaginary fears and conjured-up horrors are realities to the sufferer, I will say but little; those who have once witnessed that dreadful state can only pray that the time may come, and that soon, when alcohol will be consigned to its proper place in the drug-store, and otherwise be only used for manufacturing purposes.

CONCLUSION.

Some may perhaps be inclined to think that I have drawn an exaggerated picture of the deleterious action of tea, coffee, tobacco and alcoholic stimulants upon the human frame, because they see these articles in daily use and only rarely witness the effects I have attributed to them. Such persons should bear in mind, that disease is not the growth of a day, but rather the result of a constant series of insensible quantities. Where the above-mentioned articles are used in moderation, the evil results are only partially observed. Who would imagine, when under the enlivening influence of "a good cup of tea," that its persistent use would result in depression of spirits, sick-headache, neuralgia or backache? — and how many, when enjoying their first glass of wine at the social dinner-party, are willing to believe that they are on the road that has led so many to the horrors of delirium tremens? Only the physician witnesses these effects from first to last; into his ear is poured the long list of complaints, of aches and pains, when outraged Nature claims her rights, and to him do people resort for relief; he alone attends on man from the cradle to the grave; the infant's first cry falls

upon his ear, and it is his hand that is most frequently clutched by the dying sufferer. Unfortunately this world is so constituted, that he who strikes the warning note is too sure to render himself thereby unpopular; and if, under the pressure of conscientious motives, he still urges his unwilling patients to abstain from using what he knows to be sapping their constitutions, his services are too frequently dispensed with, and he finds that some less scrupulous and more accomodating member of the profession is installed in his stead. But although such treatment may, to a certain extent, lessen his emoluments, if he be only impelled by right motives, the consciousness of having benefited a few will be his reward, and he will rest happy in the thought of having done his duty in that position in life in which it had pleased God to place him.



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